

United States  
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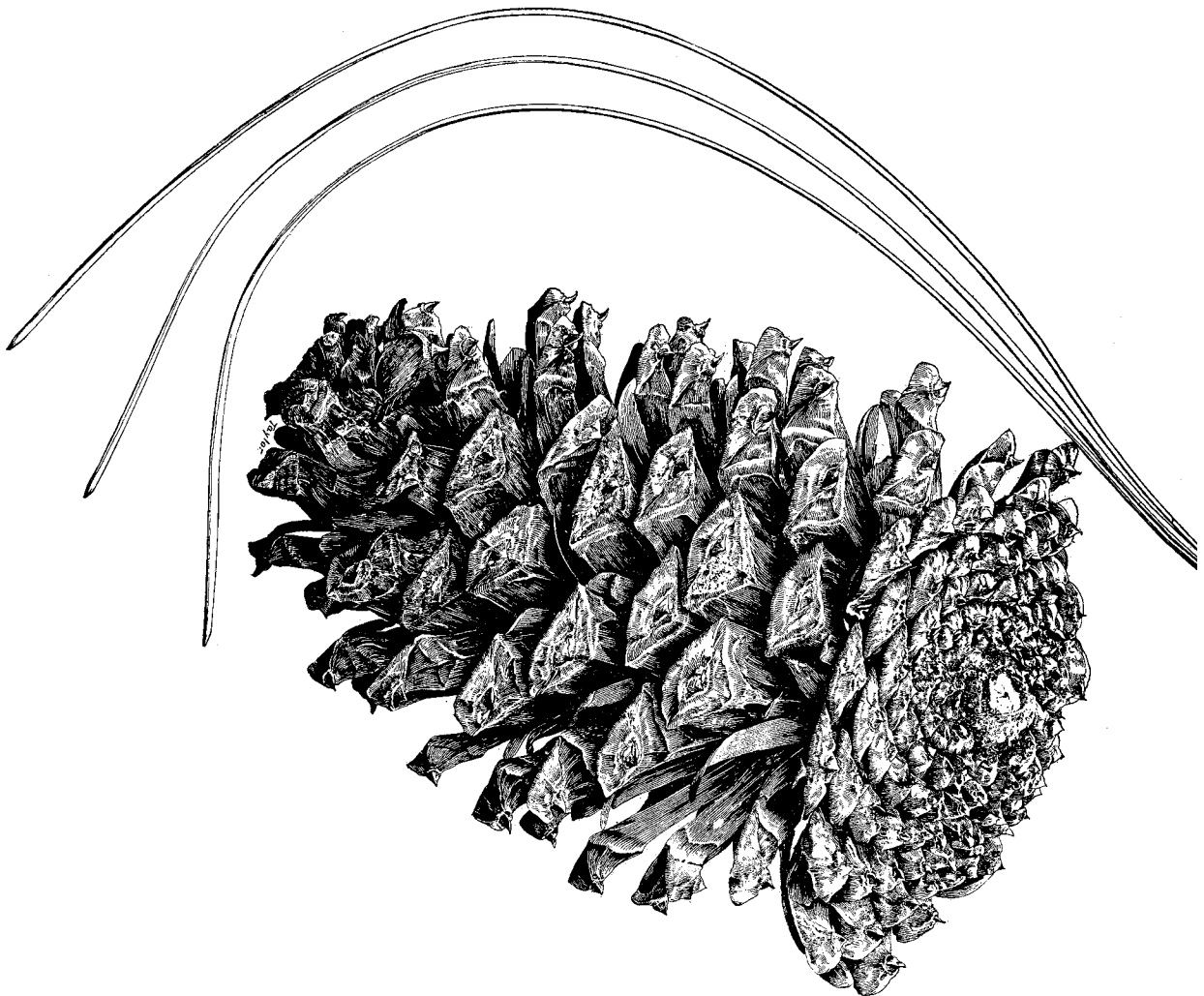


Pacific  
Northwest  
Region

September 2003

# Okanogan National Forest

## Annual Report on Forest Plan Implementation and Monitoring for Fiscal Year 2002



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## ***INTRODUCTION***

Monitoring is done to measure progress in *Forest Plan* implementation. It consists of gathering data, making observations, and collecting and disclosing information. Monitoring is also the means to determine how well objectives of the *Plan* are being met, and how appropriate the management Standards and Guidelines are for meeting the Forest's outputs, and protecting the environment. Monitoring is used to determine how well assumptions used in development of the *Forest Plan* reflect actual conditions.

Monitoring and evaluation may lead to change in practices or provide a basis for adjustments, amendments, or Plan revision. Monitoring is intended to keep the *Forest Plan* dynamic and responsive to change. Upon evaluation of the data and information, determinations are made as to whether or not planned conditions or results are being attained and whether they are within *Forest Plan* direction. When a situation is identified as being outside the limits of acceptable variability, changes may need to occur.

This report covers *Forest Plan* monitoring and evaluation for the Okanogan National Forest for Fiscal Year (FY) 2002. Monitoring and evaluation processes are laid out in the amended *Okanogan National Forest Land Management Plan (Forest Plan)*. Under this process, full reports for each individual monitoring item by various resource specialists were completed. These were reviewed and evaluated by the *Forest Plan* Interdisciplinary Team (IDT). The IDT then made recommendations, and forwarded them to the Forest Leadership Team for consideration.

In this report you will find various sections explaining the *Forest Plan* itself, monitoring methods, and evaluation of monitoring practices, standards and outputs under the *Forest Plan*.

## Forest Plan Decisions

The amended *Forest Plan* is a set of decisions that guide management of the Okanogan National Forest. Taken broadly, it contains three types of decisions:

**Goals, Objectives, and Desired Future Conditions** provide general direction regarding where the Forest should be headed as the *Forest Plan* is put into practice.

**Standards** tell how to put the *Forest Plan* into practice, or give conditions that must be met while the *Plan* is implemented.

**Land Allocation** by management areas (MAs) as described in the *Forest Plan* and displayed on the *Forest Plan* Map, in a sense "zone" the Forest into different types of areas that are suitable and available for different types of land management and resource production.

Monitoring is gathering information and observing management activities. *Forest Plan* monitoring is organized into three levels:

Implementation monitoring determines whether goals, objectives, standards and management practices are implemented as detailed in the amended *Forest Plan*, asking, "*Did the Forest do what it said it was going to do?*"

Effectiveness monitoring determines whether management practices, as designed and executed, are effective in meeting amended *Forest Plan* standards, goals, and objectives. The question being asked is, "*Did the management practice or activity do what was intended?*"

Validation monitoring is used to determine whether the data, assumptions and coefficients used in the development of the amended *Forest Plan* are covered. The question being asked is, "*Is there a better way to meet the Forest Plan's goals and objectives?*"

## Monitoring Methods

The amended *Forest Plan* defines a process that was designed to monitor implementation of the decisions above. Is the Forest doing what the *Plan* envisioned? Are the effects and outputs equivalent to what was predicted in the *Forest Plan*? Are the standards working? Do practices need to be adjusted to meet standards? Does the monitoring process need to be adjusted?

In addition to these monitoring methods, there are also monitoring procedures for timber sales, grazing allotments, fisheries, water quality, wildlife, and project effects. The results of these other types of monitoring are considered in this report.

## ***MONITORING IMPLEMENTATION of the NORTHWEST FOREST PLAN***

The *Record of Decision and Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl (Northwest Forest Plan)* amended the *Okanogan Forest Plan* in April of 1994. The decision resulted in some change in management emphasis for lands administered by the Okanogan Forest, generally west of the lower and middle portions of the Methow River and west of the Chewuch River and Andrews Creek.

The *Northwest Forest Plan* requires that a monitoring plan be developed and incorporated into current Forest monitoring plans. The following narrative addresses the key implementation monitoring items identified on pages E-5 and E-6 of the ROD and Standards and Guidelines. Many of the effectiveness and validation monitoring items are being monitored through current efforts. As new monitoring direction arrives, it will be incorporated. This section is organized according to the following categories:

Late-Successional Reserves  
Riparian Reserves  
Matrix  
Key Watersheds  
Watershed Analysis  
Participation

### **Late-Successional Reserves**

#### **1. Is timber harvest consistent with Standards and Guidelines and with Regional Ecosystem Office review requirements?**

Planning is underway for the Hungry Hunter project that would include stand treatment in the Hunter Mountain LSR, consistent with Standards and Guidelines.

#### **2. Were other management activities consistent with standards and guides?**

All projects were designed to be consistent with Standards and Guidelines.

#### **3. Have Late-Successional Reserve assessments been completed?**

An Assessment of the Northeastern Cascades Late-Successional Reserves was published in April 1998.

#### **4. Were management activities consistent with LSR assessments?**

Management activities were designed to be consistent with the LSR assessment and watershed analysis documents.

### **Riparian Reserves**

#### **1. Width and integrity of Riparian Reserves; did the conditions that existed before management activities were conducted change in ways that are not in accordance with the Standards and Guidelines?**

The width and integrity of riparian reserves was maintained for all projects; no changes were made in default guidelines.

#### **2. Was watershed analysis completed prior to management activities where required?**

Watershed analysis has been completed where required prior to management activities.

### **3. Were management activities in Riparian Reserves consistent with Standards and Guidelines?**

If possible, management activity was designed to avoid riparian reserves. Activities in portions of riparian reserves were designed to be consistent with ACS objectives, and applicable Standards and Guidelines.

#### **Matrix**

#### **1. Did number and distribution of green trees meet Standards and Guidelines in harvested areas?**

For applicable timber harvest prescriptions, the number and distribution of green trees meet Standards and Guidelines.

#### **2. Were appropriate amounts of snags and coarse woody debris retained?**

The appropriate amount of snags and coarse woody debris were retained in timber harvest areas.

#### **3. Was watershed analysis completed prior to harvesting late-successional stands in watersheds with less than 15 percent late-successional forest remaining?**

No harvest of late-successional stands occurred.

#### **Key Watersheds**

#### **1. Was watershed analysis completed prior to management activities?**

Where required, watershed analysis was completed prior to management activity.

#### **2. Was the presence and timing of activities, including restoration projects coordinated?**

The presence and timing of activities was coordinated through interdisciplinary participation by various District specialists.

#### **3. Were any new roads built in roadless areas?**

No new roads were proposed for roadless areas.

#### **4. Was there a net increase in roads?**

In key watersheds, there was no net increase in roads. In most situations, there was a net decrease in roads due to proposed road management (decommissioning).

#### **Watershed Analysis**

#### **1. Was presence and timing of watershed analysis appropriate?**

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Appropriate watershed analysis was completed as required.

### **Participation**

**1. Were multiple agencies, the public, and others involved in planning, implementing, and monitoring watershed analysis?**

Efforts were made to include the public, and other agency involvement in the process of completing watershed analysis. Government to government consultation with the appropriate American Indian Tribes was conducted on all projects.

**2. Was information sharing pursued between all parties such as agencies, publics, and communities?**

Yes, see above.

**3. Were clear expectations and responsibilities identified?**

Yes, where applicable.

**4. Were active partnerships developed?**

There is an on-going effort to keep local citizens, governments, and organizations informed of proposed projects.

### **Provincial Advisory Committee Monitoring**

Monitoring under the Northwest Forest Plan is done by the Eastern Washington Cascades Provincial Advisory Committee (PAC). In 2002, monitoring activities for 2002 were cancelled due to the heavy fire activity.

### ***SUMMARY of RECOMMENDED ACTIONS TABLE***

	<b>Results Okay: Continue Monitoring</b>	<b>Change Management Practices</b>	<b>Further Evaluation</b>	<b>Forest Plan Amendment or Revision</b>	<b>Recommendations</b>
<b>NEPA</b>					
1. NEPA Compliance		X			Change Management Practice. The Forest has implemented changes to ensure that changes made between publication of EAs and Decision Notices are limited to minor, non-analytical corrections or explanations. The decision on Conger IRP was withdrawn because of inadequate soils analysis. The Forest Soil Scientist has been working closely with the Regional Office to correct deficiencies.
<b>RECREATION</b>					Item not addressed this year
<b>WILDERNESS</b>					Item not addressed this year
<b>WILD and SCENIC RIVERS</b>					Item not addressed this year
<b>WILDLIFE</b>					
11. Primary Cavity Excavators Habitat Management	X				Results okay; continue existing monitoring project.
18. Bald Eagle Habitat Management	X				Results okay; continue monitoring nest locations for activity and number of young fledged.
19. Grizzly Bear Habitat Management	X				Results okay; continue to assess the effects of projects on grizzly bears and complete consultation.
25. Northern Spotted Owl	X				Results okay; continue monitoring with partners.



	Results Okay: Continue Monitoring	Change Management Practices	Further Evaluation	Forest Plan Amendment or Revision	Recommendations
<b>FISH</b>					
32. Fish Habitat/Riparian Condition			X		Further evaluation. As funds become available, efforts need to be directed at resources for watershed restoration. Continue to work with federal, state and county governments, and the local communities to modify operations of water diversions. Continue to analyze and monitor roads and recreational sites within riparian areas. Modify or remove roads and/or recreational sites that prevent attainment of Aquatic Conservation Strategy Objectives or Riparian Management Objectives.
33. Riparian Acres with Timber Harvest	X				Results okay; continue monitoring. Provide consistent riparian management direction across the Forest during <i>Forest Plan</i> revision.
35. Fisheries Improvements	X				Results okay; continue monitoring Work on both districts is achieving objectives in restoring riparian and aquatic habitat. Continued monitoring, maintenance and education efforts are required.

	Results Okay: Continue Monitoring	Change Management Practices	Further Evaluation	Forest Plan Amendment or Revision	Recommendations
<b>RANGE</b>					
38. Allotment Management Plans	X				Results okay; continue monitoring. Riparian Objectives will be incorporated into the AMPs as the AMPs are developed. Continue to place Riparian Objectives in the grazing permits and discuss them with the permittees at the annual operating plan meetings. Continue to emphasize administration of allotments with regards to the <i>Forest Plan</i> , PACFISH, INFISH, and <i>Northwest Forest Plan</i> Standards and Guidelines.
<b>TIMBER</b>					
40. Timber Sale Program quantity				X	Projected outputs from the Forest Plan have not been accomplished during the period covered by the plan. Complete <i>Forest Plan</i> revision as soon as possible, including recalculation of the ASQ and TSPQ. Revision of the <i>Forest Plan</i> is currently in process and should be completed by 2006. Identify barriers to accomplishment and correct them.
43. Timber Suitability	X				Results okay; continue monitoring
44. Reforestation	X				Results okay; continue monitoring
45. Insect, Disease and Animal Damages		X			Change management practices; substantial acreages have been impacted by insects, resulting in large amounts of standing dead. <i>Forest Plan</i> revision is urgently needed to address increasing fire risk resulting from accumulated dead biomass created by the ongoing bark beetle epidemics.

	Results Okay: Continue Monitoring	Change Management Practices	Further Evaluation	Forest Plan Amendment or Revision	Recommendations
<b>WATERSHED/SOIL</b>					
47. Water Quality/Best Management Practices	X				Results okay; continue monitoring. Continue emphasis on collecting water quality information associated with projects in basins that are on the State's 303(d) list. Continue to collect water samples and test for the presence of picloram.
48. Water Quality	X				Results okay; continue monitoring. Any vegetation management in Boulder Creek, Twenty Mile Creek and the Chewuch River should consider impacts on water temperature.
51. Soil and Water Improvements	X				Results okay; continue monitoring and identifying potential improvement projects.. Emphasis on soil and water improvement should continue to identify projects associated with road stabilization (jointly with Engineering input and funding) and road closure where the greatest risk of soil erosion and sedimentation occurs. Coordinate with fisheries in jointly funding projects where soil erosion and sedimentation into fisheries streams are a concern.
<b>FACILITIES</b>					
53. Road Miles and Operational Status	X				Results okay; continue monitoring. Continue to utilize watershed analysis, roads analysis, and project level analysis to identify the need for roads, and to update forest road inventories.
<b>FIRE</b>					
55. Actual Annual Fire Wildfire Occurrence	X				Results okay; continue monitoring
<b>AIR QUALITY</b>					
59. Smoke Management	X				Results okay; continue monitoring

	<b>Results Okay: Continue Monitoring</b>	<b>Change Management Practices</b>	<b>Further Evaluation</b>	<b>Forest Plan Amendment or Revision</b>	<b>Recommendations</b>
<b>MINERALS</b>					
60. & 62. Combined Operational and Administrative Effectiveness and Reasonableness		X			Change management practices. Forest and District priorities are usually set early in the year but these are too easily forgotten as unscheduled projects surface or old projects resurface during the year. Continued Forest and District effort is needed to adhere to these priorities or make a conscious effort to periodically review and revise them in order that non-discretionary actions such as mining plan reviews can be completed within reasonable time frames.
63. Mineral Withdrawals	X				Results okay; continue monitoring
<b>HERITAGE</b>					
70. Heritage Resource Site Protection	X				Continue monitoring
<b>VEGETATION MANAGEMENT</b>					
71. Management of Competing and Unwanted Vegetation	X				Results okay; continue monitoring new invasive species with high potential for spread in the field. Use tools such as GIS to track treatments and to help interpret spread of noxious weeds and help set priorities on treatment areas. Continue to use the prevention strategy in the planning of all ground disturbing projects and implement the Okanogan and Wenatchee National Forests Prevention Strategy.

	<b>Results Okay: Continue Monitoring</b>	<b>Change Management Practices</b>	<b>Further Evaluation</b>	<b>Forest Plan Amendment or Revision</b>	<b>Recommendations</b>
72. Survey and Manage	X				Results okay, continue monitoring; initiate program to locate S&M known sites on the Forest and complete work on Strategic Surveys and Purposive Surveys for all Categories of species. Continue pre-disturbance surveys for Category A and C species prior to project implementation, manage all known sites for Category A, B, and E species, and determine high priority sites to manage for Category C, and D species. Seek continued regional support for development of local expertise in survey and manage species taxonomy.

# ***EVALUATION REPORTS***

## **Monitoring Item #1: Project Compliance with NEPA Procedures**

**Objective or Purpose:** NEPA compliance including implementing Standards and Guidelines of the *Forest Plan*.

**Type of Monitoring:** Implementation ☒ Effectiveness ☒ Validation ☐

**Method of Monitoring:** One project on each District reviewed by Forest/District Environmental Coordinators

**Unit of Measure:** NEPA inconsistencies and results of appeals

**Criteria:** *Forest Plan* direction, Standards and Guidelines

**Standards:** Any remands or decisions withdrawn

**Frequency Item is Monitored:** Two field reviews per year

**Evaluation:** The Forest approved 7 projects under Categorical Exclusions with Decision Memos and 9 projects under Categorical Exclusions that required no Decision Memo in Fiscal Year (FY) 2002. Eleven Decision Notices approved projects documented in Environmental Assessments. No Records of Decision were signed for Environmental Impact Statements.

One appeal received in FY 2001 on an outfitter-guide performance evaluation was affirmed. A total of 10 appeals were received on 6 projects under the 215 appeal rule in FY 2002 as follows:

Two appeals were received on the 10/19/01 Helicopter Assisted Skiing decision; this decision was remanded because of numerous adjustments made between the EA and Decision Notice without public comment.

Two appeals were received on the 10/19/01 Snowmobile Outfitter-Guide/Blackpine Basin Hut decision; this decision was remanded because of numerous adjustments made between the EA and Decision Notice without public comment.

One appeal was received on the Integrated Weed Management decision; the appeal decision was not issued in a timely fashion, so the Line Officer's decision was final; had a merit review been completed within the statutory timeframes, the decision would have been affirmed.

Two appeals were received on the Conger Integrated Resource Project during Fiscal Year 2002; the decision on Conger was withdrawn due to inadequate soils analysis.

One appeal was received on the 7/17/02 Snowmobile Outfitter-Guide/Blackpine Basin Hut decision; this decision was affirmed.

Two appeals were received on the 7/31/02 Helicopter Assisted Skiing decision; the decision was affirmed.

The Threshold of Variability was exceeded because of the Snowmobile Outfitter-Guide/Blackpine Basin Hut and Helicopter Assisted Skiing remands and the withdrawal of the decision on Conger IRP.

One project on the Tonasket Ranger District was monitored for effectiveness of implementing designation by description marking. Designation by description was used to reduce exposure of marking crews to paint, and reduce marking costs. Post logging monitoring showed that all trees harvested by contractors were likely within the designated size. Four stumps had diameters larger than the maximum size of 21 inches, but were likely within the designated size when measured at breast height.

**Recommended Actions:** Change management practice. The Forest has implemented changes to ensure that changes made between publication of EAs and Decision Notices are limited to minor, non-analytical corrections or explanations. The decision on Conger IRP was withdrawn because of inadequate soils analysis. The Forest Soil Scientist has been working closely with the Regional Office to correct deficiencies.

**Monitoring Item #2: Physical, Social and Managerial Setting for Recreation**  
***Reported every 5 years***

**Monitoring Item #3 User (visitor) Needs and Expectations**  
***Reported every 5 years***

**Monitoring Item #4: ORV Use Rate and Patterns**  
***Reported every 5 years***

**Monitoring Item #5: Physical, Social and Managerial Setting for Wilderness**  
***Reported every 5 years***

**Monitoring Item #6: Specific Area Use Levels**  
***Reported every 5 years***

**Monitoring Item #7: Effects of Activities on Attributes for Potential Classification of River Segments Eligible for Wild and Scenic River Designation.**  
***Reported every 5 years***

**Monitoring Item #8: Mule Deer Management as an Indicator for Deer Winter Range**  
***Reported every 5 years***

**Monitoring Item #9: Mule Deer Population Levels**  
***Reported every 5 years***

**Monitoring Item #10: Old Growth Ecosystems:**  
***Reported every 3 years***

**Monitoring Item #11: Primary Cavity Excavators – Habitat Management**

**Objective or Purpose:** Habitat Management

**Type of Monitoring:** Implementation ☒ Effectiveness ☒ Validation ☐

**Method of Monitoring:** Estimate numbers of snags and wildlife trees by sampling timber management projects and established transects

**Criteria:** *Forest Plan* direction, Standards and Guidelines

**Standards:** Does greater than 10% of the area have less than 90% of prescribed level of snags?

**Frequency Item is Monitored:** Annually

**Evaluation:** A project to estimate snag retention during project implementation has been initiated and the first year of data collection has been completed. The study is designed to determine project effects on existing snags, including logging, post sale activities and prescribed fire.

**Recommended Actions:** Results okay; continue existing project.

**Monitoring Item #12: Primary Cavity Excavators – Habitat Management**  
**Item dropped in 1999 Report**

**Monitoring Item #13: Primary Cavity Excavators – Habitat Use**  
**Dropped in 1999 report**

**Monitoring Item #14: Lynx Habitat Management**  
**Reported every 3 years**

**Monitoring Item #15: Lynx Population Trends**  
**Reported every 5 years**

**Monitoring Item #16: Ruffed Grouse Habitat Management**  
**Reported every 5 years**

**Monitoring Item #17: Ruffed Grouse Population Changes**  
**Reported every 10 years**

**Monitoring Item #18: Bald Eagle Habitat Management**  
**Objective or Purpose:** Habitat Management

**Type of Monitoring:** Implementation \_\_\_ Effectiveness \_\_\_ Validation X

**Method of Monitoring:** Sample potential nest sites for occupancy. Annual mid-winter use survey

**Unit of Measure:** Number of animals

**Criteria:** *Forest Plan* direction, Standards and Guidelines

**Standards:** Is the Forest inconsistent with the Bald Eagle Recovery Plan?

**Frequency Item is Monitored:** Every year

**Frequency Item is Reported:** Every year

**Evaluation:** The nest in the Methow Valley was monitored and a pair was present. The *Bald Eagle Recovery Plan* targeted the Methow Valley for one nest. The nest was monitored and a pair of eagles was present. Two young were fledged in 2002. A second nest located near by was not active in 2002. Neither of these nests is located on National Forest System lands. A third nest in the lower Methow Valley along the Methow River was not active. The annual mid-winter use survey was not completed.

**Recommended Action:** Results okay; continue monitoring nest locations for activity and number of young fledged.

**Monitoring Item #19: Grizzly Bear Habitat Management**

**Objective or Purpose:** Habitat Management

**Type of Monitoring:** Implementation X Effectiveness \_\_\_ Validation \_\_\_



**Method of Monitoring:** Review National Environmental Policy Act (NEPA) documents for adherence to guidelines. Field verify implementation of guidelines.

**Unit of Measure:** N/A

**Criteria:** *Forest Plan* direction, Standards and Guidelines

**Standards:** Are Biological Assessments completed and grizzly bear guidelines followed?

**Frequency Item is Monitored:** Every Year

**Evaluation:** Biological assessments and consultation were completed to address the effects of each project on grizzly bears within the North Cascades Grizzly Bear Recovery Zone. Outside the recovery zone, projects are assessed for connectivity effects. Core area analysis continued to address seasonal habitats within Bear Management Units.

**Recommended Action:** Results okay; continue to assess the effects of projects on grizzly bears and complete consultation.

**Monitoring Item #20: Bighorn Sheep Habitat Management**  
***Reported every 5 years***

**Monitoring Item 21: Big Horn Sheep Population Changes:**

**Monitoring Item #22: Mountain Goat Habitat Capability**  
***Reported every 2 years***

**Monitoring Item #23: Mountain Goat Population Trends**  
***Reported every 5 years***

**Monitoring Item #24: Peregrine Falcon**  
***Reported every 5 years***

**Monitoring Item #25: Northern Spotted Owl**

**Objective or Purpose:** Habitat Capability and Population Changes

**Type of Monitoring:** Implementation \_\_\_\_\_ Effectiveness X Validation X

**Method of Monitoring:** GIS with field verification to assess suitable habitat. Follow Regional protocol for population monitoring.

**Unit of Measure:** Habitat capability and occupancy.

**Criteria:** *Forest Plan* direction, Standards and Guidelines

**Standards:** Is northern spotted owl suitable habitat between 92,115 and 112,585 acres?

**Frequency Item is Monitored:** Every year

**Frequency Item is Reported:** Every year

**Evaluation:** Habitat capability has not changed. No timber projects or fires occurred in spotted owl habitat. Each project proposal within the range of the northern spotted owl is assessed to determine the effects on spotted owls and spotted owl habitat, a biological assessment is prepared to document and support the effects determination, and a consultation with the U.S. Fish and Wildlife Service occurs to address identified effects. All known nests are within Late Successional Reserves or congressionally reserved areas. Monitoring known nest sites occurred with partners in the following areas: War Creek, Pekin Creek, Sandy Butte, Lost River and Foggy Dew between April and July. Pekin Creek had possible reproduction and a possible adult on Sandy Butte.

**Recommended Action:** Results okay; continue monitoring with partners.

**Monitoring Item #26 and 27: Pileated Woodpecker, Pine Marten, Three-toed Woodpecker and Barred Owl**

***Reported every 5 years***

**Monitoring Item #28: Sensitive Species**

***Reported every 5 years***

**Monitoring Item #29: Raptor Nests**

***Reported every 5 years***

**Monitoring Item #30: Diversity**

***Reported every 5 years***

**Monitoring Item #31: Anadromous and Resident Fish Management Indicator Species**

***Reported every 5 years***

**Monitoring Item #32: Fish Habitat and Riparian**

**Objective or Purpose:** Determine if project implementation is resulting in expected condition for Riparian and Aquatic Ecosystems.

**Type of Monitoring:** Implementation   X   Effectiveness   X   Validation       

**Method of Monitoring:** Environmental Assessment (EA) with field review of sample of projects annually.

**Unit of Measure:** Percentage of Fish/Riparian Standards and Guidelines successfully identified and applied

**Criteria:** *Forest Plan* direction, Standards and Guidelines

**Standards:** Is there compliance with Forest-wide direction?

**Frequency Item is Monitored:** Every year

**Evaluation:** Standards and Guidelines that describe expected conditions are not being met in riparian/aquatic areas. There are two reasons for this: 1) some of the Standards and Guidelines need refinement and 2) some riparian/aquatic areas are not in a “healthy” (*ie.*, all natural processes functioning appropriately) condition. Monitoring programs to assess the condition of riparian areas and fish habitat include: stream surveys, stream temperature, fine sediment, bull trout redds and high lakes. The understanding of the natural condition of forest streams has advanced since the last iteration of the *Forest Plan*, and new information will be incorporated into the upcoming *Forest Plan* revision.

Temperature is being monitored cooperatively by several agencies using continuously recording thermographs in major tributaries to the Methow River. Thermograph placements and data management are coordinated with WDFW, Yakama Nations, and the Pacific Watershed Institute.

Sediment is monitored annually using the McNeil core method. Washington Conservation Crews collect the samples in known salmon spawning habitat. Samples are collected by coring into the substrate of the riverbed. Samples are then analyzed for particle size distribution and compared with prior year's data.

Flow monitoring data was collected and biological opinions were issued to three irrigation ditches that begin on federal land in the Methow Basin. These opinions specify a "target flow" to protect habitat for listed fish. Once stream flows drop to target levels, ditch operators are required to close their headgates. Flow monitoring and reporting is required by the Biological Opinion and are monitored using flow meters and USGS gages. This work was funded primarily by lands and special use permit administration funds in addition to fisheries and watershed funds.

Stream habitat surveys were conducted in Pelican Creek (4 miles), South Fork Salmon Creek (5 miles), and Chewuch River (27 miles). Fish distribution snorkel surveys were conducted in these same locations.

Lake surveys were conducted in the northern Pasayten wilderness. Some riparian impacts are occurring from recreational use, and the lakes have been stocked with non-native fish. Water chemistry and zooplankton measurements taken may provide a baseline against which to measure future changes.

Bull trout redd surveys in Methow basin began in 1995. The 2002 count of 196 redds in Methow basin was the largest count ever, in part because the survey areas have been adjusted over time and are now more effectively targeting areas where fluvial spawning occurs. Twisp watershed redd counts remain high, and in 2002 there was a dramatic increase in counts from Methow watershed. In 2002 the presence of fluvial spawning in upper Goat Creek was confirmed, and the first redds were counted in West Fork Buttermilk. For more details see *Methow Ranger District Bull Trout Monitoring Report 2002*.

**Recommended Actions:** Further evaluation is needed and is planned as a component of *Forest Plan* revision. As funds become available, efforts need to be directed at resources for watershed restoration. Continue to work with federal, state and county governments, and the local communities to modify operations of water diversions. Continue to analyze and monitor roads and recreational sites within riparian areas. Modify or remove roads and/or recreational sites that prevent attainment of Aquatic Conservation Strategy Objectives or Riparian Management Objectives.

### **Monitoring Item #33: Riparian Acres with Timber Harvest**

**Objective or Purpose:** Monitor impacts of timber harvest on Riparian Ecosystems for sales sold during the fiscal year.

**Type of Monitoring:** Implementation X Effectiveness X Validation \_\_\_\_

**Method of Monitoring:** GIS, SILVA/TRACS, District Records.

**Unit of Measure:** Acres treated by timber harvest within sales sold during the fiscal year.

**Criteria:** *Forest Plan* direction, Standards and Guidelines

**Standards:** Are the riparian acres with timber harvest more than 336 or less than 224 in the decade?

**Frequency Item is Monitored:** Every year

**Evaluation:** No timber sales sold during Fiscal Year 2002 included timber harvest within riparian areas. About half of the Okanogan National Forest is under interim direction provided by either INFISH or PACFISH. The western half of the Methow Valley District has management direction provided under the *Northwest Forest Plan*. Timber harvest as a tool for vegetation management is not used within riparian areas due to controversy.

**Recommended Actions** Results okay; continue monitoring. Provide consistent riparian management direction across the Forest during *Forest Plan* revision.

**Monitoring Item #34: Fish Habitat Capability**  
***Dropped in 1998***

**Monitoring Item #35: Fisheries Improvements**

**Objective or Purpose:** Determine if planned fisheries improvement projects are implemented.

**Type of Monitoring:** Implementation ☒ Effectiveness ☐ Validation ☐

**Method of Monitoring:** Accomplishment reports, consultation with district and field reviews

**Unit of Measure:** Acres, structures

**Criteria:** *Forest Plan* direction, Standards and Guidelines

**Standards:** Did the Forest develop less than 14 resident or anadromous fish habitat improvements (structures)? Did the Forest develop less than 3 acres of resident or anadromous fish habitat?

**Frequency Item is Monitored:** Every year

**Frequency Item is Reported:** Every year

**Evaluation:** The Methow Valley and Tonasket Ranger Districts continue to monitor and maintain Respect the River projects. This program uses a combination of restoration and education to rehabilitate stream and riparian habitat in heavily used recreation areas. The objective of the program is to provide desired recreation use while protecting aquatic and riparian resources. Restoration includes using various barriers such as buck-and-pole fences to keep people and traffic off sensitive areas, riparian planting, hardening sites to prevent erosion, user contacts and information signs. The Methow Valley ranger District focused on the Twisp and Chewuch watersheds. The Tonasket District worked in an area known as Jimmy Meadows. At Jimmy Meadows, in addition to recreation impacts, homesteading and cattle grazing had converted a wet meadow to a dry pasture. The project is implementing a new grazing strategy and routed a diverted stream back to the Meadow.

**Recommended Actions:** Work on both districts is achieving objectives in restoring riparian and aquatic habitat. Continued monitoring, maintenance and education efforts are required.

**Monitoring Item #36: Range Condition**  
***Reported every 5 years***

**Monitoring Item #37: Range Habitat Improvement**  
***Combined with #38***

**Monitoring Item #38: Allotment Management Plans**  
***#37 Riparian Habitat Improvement combined with #38***

**Objective or Purpose:** Ensure allotment management plans (AMPs) are developed and implemented, and that the plans incorporate *Forest Plan* Standards and Guidelines, including Riparian Objectives

**Type of Monitoring:** Implementation ☒ Effectiveness ☐ Validation ☐

**Method of Monitoring:** Review environmental assessments and allotment management plans

**Unit of Measure:** AMPs completed

**Criteria:** *Forest Plan* direction, Standards and Guidelines, Riparian Objectives

**Standards:** Has the Forest prepared an average of six allotment management plans per year?

**Frequency Item is Monitored:** Every year

**Frequency Item is Reported:** Every year

**Evaluation:** Three allotment management plans that include Standards and Guidelines, including Riparian Objectives, have been completed for the Okanogan National Forest. These are Clark, Squaw and Libby. No other allotment management plans have Riparian Objectives incorporated into the AMPs because they have not been updated due to lack of funding. However, as directed by the Regional Office, *Forest Plan* Standards and Guidelines, including Riparian Objectives, are included in all term grazing permits and the applicable Riparian Objectives are discussed with the grazing permittees during the annual operating plan meetings which are held prior to each grazing season.

Environmental analysis began in FY 1999 on the Hull, Beaver, Frazer, Finley, Toroda, and Sheridan allotments, and were to be completed in FY 2002, but were not due to heavy fire activity. The NEPA and AMPs for Toroda and Sheridan are expected to be completed in FY 2003. The NEPA and AMPs for Hull, Beaver, Frazer and Finley are very close to completion and it is expected they will be completed in the first quarter of FY 2004.

Field analysis was completed on the Cayuse, Siwash, Lost. Phoebe, Haley, Benson, Texas, and Buck allotments in FY 2002. The NEPA document and AMPs are expected to be completed in FY 2004.

Field analysis was begun on the Salmon Basin, Ryan, BS and Fish Coulee allotments in FY 2002. Field analysis is scheduled for completion in FY 2003, with the NEPA and AMPs to be completed during 2004 if the appropriate funds are allocated.

**Recommended Action:** Results okay; continue monitoring. Riparian Objectives will be incorporated into the AMPs as the AMPs are developed. Continue to place Riparian Objectives in the grazing permits and discuss them with the permittees at the annual operating plan meetings. Continue to emphasize administration of allotments with regards to the *Forest Plan*, PACFISH, INFISH, and *Northwest Forest Plan* Standards and Guidelines.

**Monitoring Item #39: Size and Dispersion of Created Openings**  
**Reported every 3years**

**Monitoring Item #40: Timber Sale Program Quantity:**  
**Timber Sale Quantity is combined with #42 and #69**

**Objective or Purpose:** Chargeable Saw Timber Volumes Offered and sold are Consistent with *Forest Plan*

**Type of Monitoring:** Implementation   X   Effectiveness      Validation     

**Method of Monitoring:** Attainment Reports

**Unit of Measure:** MMBF

**Criteria:** *Forest Plan* direction, Standards and Guidelines

**Standards:** What is the annual average TSPQ?

**Frequency Item is Monitored:** Every year

**Frequency Item is Reported:** Every year

**Evaluation:** In FY 2002, the Forest offered approximately 3.49 MMBF (6,701 CCF) of merchantable timber and convertible wood products, all of which sold during the same fiscal year. Included in these figures are approximately 2.577 MMBF (5.17 CCF) of biomass, firewood, posts, and pole products.

Fiscal Year	Forest TSPQ (MMBF) Sold <sup>1, 2</sup>	Percent of Plan Projection <sup>3</sup>
90	73.86	97.4
91	29.00	38.3
92	16.50	21.8
93	14.06	18.5
94	19.24	25.4
95	22.42	29.6
96	23.16	30.6
97	23.48	31.0
98 <sup>4</sup>	6.01	8.0
99 <sup>4</sup>	16.53	21.8
00 <sup>4</sup>	1.26	1.6
01 <sup>4, 5</sup>	13.00	16.5
02 <sup>4</sup>	6.07	8.0

1 All timber products including saw logs and convertible products. . All volumes are based upon sales **sold** during the fiscal year. Volume that is offered for sale, but that does not sell is excluded from this report.

2 Free use forest products were inadvertently omitted from monitoring reports prior to 1997. Inclusions of free use forest products in the timber sale program quantity results in an increase of overall accomplishment of up to 5 percent in some years.

3 The 1989 *Forest Land and Resource Management Plan* estimated a TSPQ of 75.8 MMBF, including 63.3 MMBF from the ASQ and 12.5 MMBF from non-chargeable wood products that did not meet merchantability standards. Non-chargeable volume includes merchantable timber removed from areas that are on lands not suited for timber production for administrative, physical, or biological reasons. It also includes wood that is smaller than the merchantability standards used in calculating the ASQ, and wood with breakage or defect that prevents its use for saw logs or veneer. Firewood, chip material used for pulp, posts, poles, and apple prop material are examples on non-chargeable wood that does not meet merchantability standards. The TSPQ and ASQ have not been recalculated to reflect changes in direction associated with the President's *Northwest Forest Plan*, PACFISH, INFISH, or Regional Forester's Amendment No. 2 to eastside Forest Plans

4 As of FY 1998, all volume is reported as CCF. Therefore, to be consistent with data reported from prior years, volume is converted to MBF for reporting. For purposes of conversion, 1 MBF is to equal approximately 1.92 CCF.

5 The timber sale contract for Sneed Biomass consisting of .62 MMCF (3.25 MMBF) sold in Fiscal Year 2001 expired without any volume being removed. No adjustment has occurred to reported volumes shown above to account for this.

**Recommended Actions:** Projected outputs from the Forest Plan have not been accomplished during the period covered by the plan. Complete *Forest Plan* revision as soon as possible, including recalculation of the ASQ and TSPQ. Revision of the *Forest Plan* is currently in process and should be completed by 2006. Identify barriers to accomplishment and correct them.

***Monitoring Item #41: Distribution of Timber Harvest Acres and Volume  
Reported every 5 years***

***Monitoring Item #42: Timber Harvest Sale Harvest Quantity  
Combined with #40 and #69***

### **Monitoring Item #43: Timber Suitability**

**Objective or Purpose:** Determine whether timber harvest occurs where the management objective is timber production on lands suitable for timber production.

**Type of Monitoring:** Implementation X Effectiveness \_\_\_\_ Validation \_\_\_\_

**Method of Monitoring:** District Review of Timber Sales, review of timber sale NEPA documents.

**Unit of Measure:** Discrepancies from *Forest Plan* direction.

**Criteria:** *Forest Plan* direction, Standards and Guidelines

**Standards:** Does timber harvest occur on lands unsuited for timber production where the purpose of harvest is timber production?

**Frequency Item is Monitored:** Every year

**Frequency Item is Reported:** Every third year

**Evaluation:** Between 1999 and 2002, timber harvest for the purposes of timber production occurred on suitable lands in compliance with *Forest Plan* direction.

**Recommended Actions:** Results okay; continue monitoring.

### **Monitoring Item #44: Reforestation**

**Objective or Purpose:** Determine whether reforestation is occurring as projected in the *Forest Plan*.

**Type of Monitoring:** Implementation X Effectiveness \_\_\_\_ Validation \_\_\_\_

**Method of Monitoring:** Growth and Survival Reports, Attainment Reports.

**Unit of Measure:** Acres reforested, Average first and third year survival, % areas stocked with first treatment.

**Criteria:** *Forest Plan* direction, Standards and Guidelines

**Standards:** Are reforestation treatments following wildfire and timber harvest effectively restoring forest tree cover?

**Frequency Item is Monitored:** Every year

**Frequency Item is Reported:** Every third year

**Evaluation:** Between 1999 and 2002, reforestation success was as projected in the *Forest Plan*. Lower first year survival in 2002 reflects drought conditions and the decreasing number of clearcut acres or seed tree harvest that are harvested and in turn, need to be reforested by planting. Reforestation acres include the following conditions: planting, site preparation where natural regeneration is expected, and acres surveyed where natural regeneration occurred following logging or wildfire where no further reforestation treatments were considered to be necessary.

Fiscal Year	% 1 <sup>st</sup> Year Survival	% 3 <sup>rd</sup> Year Survival	% 1 <sup>st</sup> Time Planting Success	% Acres Sat. Stocked	Total Refor. Acres
1989	85	71	97	91	3782
1990	94	58	80	81	3748
1991	91	70	98	99	4465
1992	91	76	99	91	4472
1993	93	72	91	91	4362
1994	75	79	92	89	4076
1995	95	78	85	87	5285
1996	78	56	81	76	4455
1997	91	70	72	66	5044
1998	84	66	79	73	1983
1999	90	73	94	100	2037
2000	81	63	80	75	1679
2001	92	68	94	100	2708
2002	72	62	96	100	1967

**Recommended Actions:** Results okay; continue monitoring.

**Monitoring Item #45: Insect, Disease and Animal Damages**

**Objective or Purpose:** Success of Integrated Pest Management

**Type of Monitoring:** Implementation   X   Effectiveness   X   Validation       

**Method of Monitoring:** Aerial and ground surveys

**Unit of Measure:** Acres and severity

**Criteria:** *Forest Plan* direction, Standards and Guidelines

**Standards:** Is there a probability of significant growth loss or mortality because of insects or animal damage?

**Frequency Item is Monitored:** Every year

**Frequency Item is Reported:** Every year

**Evaluation:** Epidemic levels of mountain pine beetle continue in lodgepole pine forests, particularly on the Methow District. An epidemic outbreak of Englemann spruce beetle is in progress in the high elevation forests located on the central portion of the Okanogan National Forest along the boundary of the Methow and Tonasket Districts. The outbreak is expected to result in near complete mortality of Englemann spruce trees that are 10" dbh and larger. Most of the mortality from Englemann spruce beetle and mountain pine beetle is within roadless areas or in wilderness. All of it is at higher elevations, often in habitats used by North American lynx. Dead trees killed by bark beetle will remain on site and



will eventually contribute to a stand replacement fire event. Douglas-fir bark beetle mortality is at epidemic levels on the east portion of the Tonasket District. No Douglas-fir tussock moth defoliation was observed on the Methow District, including the areas where insect suppression activities occurred in 2001.

**Recommended Actions:** Change management practices. Substantial acreages have been impacted by insects, resulting in large amounts of standing dead. Forest Plan revision is urgently needed to address increasing fire risk resulting from accumulated dead biomass created by the ongoing bark beetle epidemics.

**Monitoring Item #46: Stream Channel Condition**  
**Reported every 5 years.**

**Monitoring Item #47: Water Quality/Best Management Practices**

**Objective or Purpose:** To meet Federal Designated Management Agency obligations and responsibilities with respect to management of non-point source pollution. Forest Service compliance with the Clean Water Act as outlined in MOUs with the States of Washington and Oregon.

**Type of Monitoring:** Implementation\_\_\_ Effectiveness X Validation\_\_\_

**Method of Monitoring:** Interdisciplinary EA and project implementation review. Quantitative and qualitative measurement of effects.

**Unit of Measure:** Degree to which specific water quality objectives were met. Effectiveness monitoring of water quality can take many forms based on variables of concern. Units of measure will be consistent with Standard Methods and the selected variables.

**Criteria:** *Forest Plan* direction, Standards and Guidelines

**Standards:** State Water Quality Standards for each specific river basin

**Frequency Item is Monitored:** Every Year

**Frequency Item is Reported:** Every Year

**Evaluation:** Two water samples were immediately collected within the 48 hours following the herbicide application from Little Bridge Creek (tributary to the Twisp River) to determine if any detectable level of picloram. There was no picloram detected in the water samples. Adherence to the 50-foot buffer requirement appears to give satisfactory protection to water quality following the use of the herbicide picloram.

About 60 miles of roads were stabilized, closed and had surface stabilization completed under the MOU with the Washington State Department of Ecology. One culvert in Scatter Creek was replaced with a larger, lower gradient culvert to accommodate a 100-year flood event. Stabilization of roads will continue to improve water quality by improving water retention on site and reducing erosion.

**Recommended Actions:** Results okay; continue monitoring. Continue emphasis on collecting water quality information associated with projects in basins that are on the State's 303(d) list. Continue to collect water samples and test for the presence of picloram.

### **Monitoring Item #48: Water Quality**

**Objective or Purpose:** To Comply with State Water Quality Standards

**Type of Monitoring:** Implementation   X   Effectiveness      Validation     

**Method of Monitoring:** Quantitative measurement of physical and chemical water quality parameters

**Unit of Measure:** Percent of BMPs successfully identified and applied

**Criteria:** *Forest Plan* direction, Standards and Guidelines

**Standards:** Were the BMPs applied correctly (right location, design, etc.?) Were the BMPs applied in a timely fashion?

**Frequency Item is Monitored:** Every year0

**Frequency Item is Reported:** Every year

**Evaluation:** In 2002, water temperature information was collected at various locations in the Chewuch River, Andrews Creek, Boulder Creek, Lake Creek and Twenty Mile Creek. The summer of 2002 was warm and had low flows. Most streams exceeded the Washington State temperature standard of 16° C. The Washington State water temperature standard is about 16° Centigrade. Only Andrews Creek did not have water temperatures above 16° C. in 2002. All the other streams had several days above the state standard.

	State Water Temperature Standard (C)	2002 Days Exceeding Standard	Average Monthly Maximum Water Temp (C)
Lower Chewuch Creek	16°	54	21°
Upper Chewuch Creek	16°	22	17°
Boulder Creek	16°	43	21°
Twenty Mile Creek	16°	43	21°
Lake Creek	16°	6	16°
Andrews Creek	16°	0	14°

In the past, timber harvest has occurred in the lower half of the Chewuch basin, including some riparian areas along the Chewuch River. Boulder Creek and Twenty Mile Creek have also had timber harvest along the stream. Lake Creek and Andrews Creek are at higher elevations within the Chewuch basin and are not influenced by the higher water temperatures further down the drainage. If the elevated water temperatures are due, in part, to past tree canopy cover removal, it will continue to be a slow recovery towards lower water temperatures during high air temperatures and low stream flows.

Water quality is generally high on the Okanogan National Forest and generally continues to meet Washington State water quality standards, but water temperature is subject to high air temperatures and extended periods of low stream flow. The number of days the Washington State water temperature is exceeded continues to slowly decline. If the trend continues, it will be a slow recovery to pre-disturbance conditions.

**Recommended Actions:** Results okay; continue monitoring. Any vegetation management in Boulder Creek, Twenty Mile Creek and the Chewuch River should consider impacts on water temperature.

**Monitoring Item #49: Soil Compaction and Displacement**  
**Reported every 2 years**

**Monitoring Item #50: Cumulative Effects on Soil Productivity**  
**Dropped in 1991**

**Monitoring Item #51: Soil and Water Improvement Projects**

**Objective or Purpose:** Accomplish projects in priority order.

**Type of Monitoring:** Implementation (☒) Effectiveness (☐) Validation (☐.

**Method of Monitoring:** Review attainment reports.

**Unit of Measure:** Each.

**Criteria:** *Forest Plan* direction, Standards and Guidelines

**Standards:** Was scheduled attainment (90 acres) met for soil and water improvement projects.

**Frequency Item is Monitored:** Every Year

**Frequency Item is Reported:** Every Year

**Evaluation:** The Okanogan National Forest completed 10 acres of soil and water improvement projects for FY 2002 on the Tonasket Ranger District. These projects included stream bank (or lake bank) restoration, riparian fencing and identifying closing non-system roads and off road vehicle trails where soil erosion and soil compaction was a concern.

Outputs & Effects (Unit of Measures)	Estimated Decade (Annual Average)	FY 90	FY 91	FY 93	FY 94	FY 95	FY 96	FY 97	FY 98	FY 99	FY 00	FY 01	FY 02
Watershed Improvement Acres	100	80	24	65	302	180	460	189	91	118	84	102	10

**Recommended Actions:** Results okay; continue monitoring and identifying potential improvement projects. Emphasis on soil and water improvement should continue to identify projects associated with road stabilization (jointly with Engineering input and funding) and road closure where the greatest risk of soil erosion and sedimentation occurs. Coordinate with fisheries in jointly funding projects where soil erosion and sedimentation into fisheries streams are a concern.

**Monitoring Item #53: Road Miles & Operational Status**

**Type of Monitoring:** Implementation ☒ Effectiveness ☒ Validation ☐

**Method of Monitoring:** Project reviews; management reviews; public comments; forest-wide transportation plans. Continuous GIS update (as available) with field sampling and Forest Transportation Plan annually.

**Unit of Measure:** Open road density, based on the miles of open road in a given discrete management area.

**Criteria:** *Forest Plan* direction, Standards and Guidelines

**Standards:** Fails to meet plan objectives by more than ten percent annually.

**Frequency Item is Monitored:** Every Year

**Frequency Item is Reported:** Every Year

**Evaluation:** Approximately half of the Forest is allocated to Management Areas that do not have road density standards, but have prohibitions or severe restrictions on road building (e.g., wildlife, semi-primitive, wilderness and special emphasis areas). The other half is allocated to Management Areas that have a specified road density standard.

In Management Areas with a road density standard, approximately 88 percent of the acres meet the standard. Approximately 94 percent of the acres on the Forest comply with *Forest Plan* Standards designed to have limited or no wildlife disturbance from road densities.

Total Forest Acres	Percent Of Acres With No Road Density Standard	Percent Of Acres With Road Density Standard	Percent Of Total Forest Acres Meeting Road Density Standard
1.7 million	52%	48%	94%

67 percent of the discrete Management Areas with road density standards currently meet the standard. Seventy-seven miles of road have been decommissioned since the Forest began keeping records in 1992. Since that time, efforts have been made to inventory non-system roads that were not included in the earlier inventories. These roads are the "unclassified roads" described in the roads analysis rule. This has resulted in a *higher reported* inventoried road mileage in many Management Areas. Baseline information (1992) of road length by individual Management Area is reflected in the table below. When comparing the road lengths between 1992 and 2002, 18 Management Area road lengths have increased since 1992 in Management Areas not currently meeting road density standards (not including minor increases and decreases caused by rounding) primarily due to increased reporting of non-system road. The majority of these non-system roads existed before the *Forest Plan*, but had not been inventoried.

19 Management Area road lengths have decreased since 1992 in Management Areas still not currently meeting road density standards. The following Management Areas are excluded from the table below because of severe restrictions or prohibitions on road building, and lack of road density standard: 4, 4M, 7, 8, 10, 11, 15A, 15B, 18, and 24. Management Areas 17 and 27 are also excluded because of lack of road standards.

Management Area	Management Area Road Length		Area (acres)	Square Miles	Density	Forest Plan Density Level (FPDL)	Meets FPDL?
	1992	2002					
12-01	57.9	40.3	61294	95.8	0.4	2	Y
12-02	0.0	0.0	3213	5.0	0.0	2	Y
12-03	2.8	1.6	8548	13.4	0.1	2	Y
14-01	4.7	6.0	718	1.1	5.4	2	N
14-02	2.5	4.0	532	0.8	4.9	2	N
14-03	6.0	8.1	1242	1.9	4.2	2	N
14-04	2.0	2.9	441	0.7	4.2	3 <sup>1</sup>	N
14-05	29.7	27.3	6877	10.7	2.5	2.6 <sup>2</sup>	Y
14-06	72.1	64.6	20157	31.5	2.1	2	N
14-07	54.2	52	21396	33.4	1.6	2	Y
14-08 <sup>1</sup>	1.5	0.9	740	1.2	0.8	2	Y

Management Area	Management Area Road Length		Area (acres)	Square Miles	Density	Forest Plan Density Level (FPDL)	Meets FPDL?
14-09	0.6	0.9	1500	2.3	0.4	2	Y
14-10	54.8	49.4	20889	32.6	1.5	2	Y
14-11	2.6	3.3	4856	7.6	0.4	2	Y
14-12	0.6	1.2	3736	5.8	0.2	2	Y
14-13	3.1	6.7	3291	5.1	1.3	2	Y
14-14	n/a	0.1	4087	6.4	0.0	2	Y
14-15	1.0	4.6	901	1.4	3.3	2	N
14-16	2.2	1.9	970	1.5	1.3	2	Y
14-17	6.1	1.8	1717	2.7	0.7	2	Y
14-18	3.8	3.5	581	0.9	3.8	2	N
14-19	1.3	0.5	195	0.3	1.7	2	Y
14-20	7.6	3.3	1356	2.1	1.6	2	Y
14-21	10.9	9.6	2551	4.0	2.4	2	N
14-22	1.3	1.4	213	0.3	4.1	2	N
14-23	21.0	17.3	4384	6.8	2.5	2	N
14-24	4.0	5.3	1512	2.4	2.2	2	N
14-25	2.5	3.0	886	1.4	2.2	2	N
14-26	12.7	10.0	4375	6.8	1.5	2	Y
14-27	5.7	6.4	689	1.1	6.0	2	N
14-28	4.1	3.9	879	1.4	2.8	2	N
14-29	1.7	1.2	573	0.9	1.3	2	Y
14-30	2.4	0.2	687	1.1	0.2	2	Y
14-31	0.4	0.4	1431	2.2	0.2	2	Y
14-32	4.3	4.8	1436	2.2	2.2	2	N
14-33	23.2	6.5	4132	6.5	1.0	2	Y
14-34	20.1	18.4	2896	4.5	4.1	2	N
14-35	5.6	4.8	1337	2.1	2.3	2	N
14-36	9.4	11.1	2410	3.8	2.9	2	N
14-37	37.8	27.3	7284	11.4	2.4	2	N
14-38	6.1	7.3	1458	2.3	3.2	2	N
14-39	4.7	4.2	979	1.5	2.8	2	N
14-40	9.9	9.1	2507	3.9	2.3	2	N
14-41 <sup>2</sup>	0.0	0.0					
14-42	0.6	0.6	241	0.4	1.7	2	Y
25-01	216.6	194.1	47623	74.4	2.6	3	Y
25-02	54.5	46.9	26625	41.6	1.1	3	Y
25-03	11.1	9.2	1038	1.6	5.7	3	N
25-04	7.1	4.8	2708	4.2	1.1	3	Y
25-05	27.8	24.9	5678	8.9	2.8	3	Y

Management Area	Management Area Road Length		Area (acres)	Square Miles	Density	Forest Plan Density Level (FPDL)	Meets FPDL?
	1992	2002					
25-06	29.6	25.1	9796	15.3	1.6	3	Y
25-07	0.7	1.0	827	1.3	0.8	3	Y
25-08	184.2	136.6	59364	92.8	1.5	3	Y
25-09	1.4	1.3	360	0.6	2.3	3	Y
25-10	54.8	69.3	13206	20.6	2.9	3	Y
25-11	0.9	1.1	321	0.5	2.2	3	Y
25-12	47.5	33.6	24362	38.1	0.9	3	Y
25-13	13.8	10.1	4156	6.5	1.6	3	Y
25-14	4.2	1.4	1009	1.6	0.9	3	Y
25-15	34.8	30.0	15486	24.2	1.2	3	Y
25-16	52.5	59.8	57014	89.1	0.7	3	Y
25-17	21.8	33.1	9157	14.3	2.3	3	Y
25-18	55.9	41.9	15369	24.0	1.7	3	Y
25-19	0.0	0.0	51	0.1	0.0	3	Y
25-20	0.0	0.0	59	0.1	0.0	3	Y
25-21	16.1	14.9	4506	7.0	2.1	3	Y
25-22	6.7	7.7	1746	2.7	2.8	3	Y
25-23	28.0	24.5	7616	11.9	2.1	3	Y
25-24	3.5	2.7	9568	15.0	0.2	3	Y
25-25	43.8	22.8	4855	7.6	3.0	3	Y
25-26	29.8	26.5	9220	14.4	1.8	3	Y
25-28	0.6	9.4	2740	4.3	2.2	3	Y
25-29	5.3	3.6	1518	2.4	1.5	3	Y
25-30	4.9	4.8	2722	4.3	1.1	3	Y
25-31	141.8	117.9	27357	42.7	2.8	3	Y
25-32 <sup>3</sup>	9.9						
25-33	31.7	36.5	11249	17.6	2.1	3	Y
25-34	0.0	0.0	1295				
26-01	2.2	1.1	558	0.9	1.3	1	N
26-02	1.8	0.3	1226	1.9	0.2	1	Y
26-03	0.6	2.5	3851	6.0	0.4	1	Y
26-04	35.2	35.6	13564	21.2	1.7	1	N
26-05	4.3	7.8	2114	3.3	2.4	1	N
26-06	1.3	1.1	2498	3.9	0.3	1	Y
26-07	0.2	1.4	3658	5.7	0.2	1	Y
26-08	2.1	2.1	1481	2.3	0.9	1	Y
26-09	2.5	3.7	1642	2.6	1.4	1	N
26-10	4.9	4.6	4360	6.8	0.7	1	Y
26-11	3.5	3.3	2805	4.4	0.8	1	Y

Management Area	Management Area Road Length		Area (acres)	Square Miles	Density	Forest Plan Density Level (FPDL)	Meets FPDL?
	1992	2002					
26-12	4.2	5.0	936	1.5	3.4	1	N
26-13	3.3	3.1	377	0.6	5.3	1	N
26-14	0.0	0.0	4400	6.9	0.0	1	Y
26-15	7.2	2.8	1465	2.3	1.2	1	N
26-16	8.0	8.4	3499	5.5	1.5	1	N
26-17	1.0	0.0	775	1.2	0.0	1	Y
26-18	1.2	1.3	458	0.7	1.8	1	N
26-19	1.1	1.8	1313	2.1	0.9	1	Y
26-20		0.7	455	0.7	0.9	1	Y
26-21	3.1	4.2	624	1.0	4.3	1	N
26-22	1.5	1.5	1233	1.9	0.8	1	Y
26-23	6.0	6.7	1550	2.4	2.8	1	N
26-24	2.6	1.6	606	0.9	1.6	1	N
26-25	2.0	0.3	629	1.0	0.3	1	Y
26-26	0.0	0.0	817	1.3	0.0	1	Y
26-27	1.8	1.8	538	0.8	2.1	1	N
26-28	4.7	2.4	1045	1.6	1.5	1.56 <sup>4</sup>	Y
26-29	0.0	0.0	323	0.5	0.0	1	Y
26-30	2.5	1.8	762	1.2	1.5	1	N
26-31	9.7	9.5	1426	2.2	4.3	1	N
26-32	0.0	0.0	1267	2.0	0.0	1	Y
26-33	5.2	5.1	3702	5.8	0.9	1	Y
26-34	2.5	2.6	846	1.3	1.9	1	N
26-35	2.1	2.1	808	1.3	1.7	1	N
26-36	3.6	2.5	1180	1.8	1.4	1	N
26-37	3.1	1.2	381	0.6	2.0	1	N
26-38	2.8	2.8	638	1.0	2.8	1	N
26-39	1.6	1.8	1665	2.6	0.7	1	Y
26-40	7.4	6.9	5066	7.9	0.9	1	Y
5-01	31.7	48.7	34746	54.3	0.9	3	Y
5-02 <sup>4</sup>	15.6	21.5	4659	7.3	3.0	3	Y
5-03 <sup>5</sup>	40.0	65.4	26918	42.1	1.6	3	Y
5-05	1.3	1.3	1665	2.6	0.5	3	Y
5-06	7.8	12.2	3760	5.9	2.1	3	Y
5-07	0.0	0.0	442	0.7	0.0	3	Y
5-08	20.7	28.6	5437	8.5	3.4	3	N
5-09	97.3	160.4	53721	83.9	1.9	3	Y
5-10	1.5	1.2	1587	2.5	0.5	3	Y
5-11	14.3	18.3	6517	10.2	1.8	3	Y

Management Area	Management Area Road Length		Area (acres)	Square Miles	Density	Forest Plan Density Level (FPDL)	Meets FPDL?
	1992	2002					
5-12	1.6	1.6	1090	1.7	0.9	3	Y
5-13	15.7	26.2	6642	10.4	2.5	3	Y
5-14	0.2	1.4	303	0.5	2.8	3	Y
5-15	25.6	39.2	11164	17.4	2.2	3	Y
5-16	6.0	9.2	2444	3.8	2.4	3	Y
5-17	0.4	0.5	99	0.2	3.2	3	N
5-18	4.2	4.5	2847	4.4	1.0	3	Y
5-19	0.0	0.0	61	0.1	0.0	3	Y
5-20	0.0	0.0	67	0.1	0.0	3	Y
5-21	3.3	3.1	730	1.1	2.7	3	Y

<sup>1</sup> 14-04 as per Forest Plan Amendment No.12

<sup>2</sup> 14-05 as per Forest Plan Amendment No.24

<sup>3</sup> MA 14-08 had been incorrectly entered on the GIS layer and has been corrected to remove that part that should have been MA 5-02.

<sup>4</sup> This MA was combined with MA-40 since it is contiguous and should have been part of that management area

<sup>5</sup> This management area was combined with MA-31 since it is contiguous and should have been part of that management area.

<sup>6</sup> 26-28 as per Forest Plan Amendment No.11

<sup>7</sup> 26-31 as per Forest Plan Amendment No.29

<sup>8</sup> MA-08 had been incorrectly entered into the GIS layer. Correction adds more area into MA-02

<sup>9</sup> The extremely small MAs 5-04 and 5-22 in the Twisp watershed were combined with this MA to be consistent with the published preferred alternative map in the LRMP.

Road construction on the forest continues to decrease. At its highest level, 59 miles of road were constructed in 1990, and the low was 0.0 miles in 2000.

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
<b>Total System Road Construction Miles</b>	59	15.2	7	10	1.8	3.9	1.6	4.9	3.1	1.4	0	0.8	0.9

The Forest actively began obliterating roads in 1992, removing them from the transportation system.

<b>Miles of Road Decommissioned</b>	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
System	4.8	8.0	0.7	3.5	0.0	2.2	12.5	2.6	0	0.0	3.5
Non-System*								4.9	15	4.0	15

\*Prior to 1999 no records were kept of non-system road decommissioning

Most timber sale NEPA documents now approve road closures and decommissioning, and the trend is toward increasing closures. The table below displays the amount of road mileage approved in timber sale NEPA documents for closure or decommissioning since 1996. Because timber sales are implemented over a period of many years, these road closures are approved but may not yet be accomplished on the ground or entered into the roads database, and therefore may not yet be reflected in the road densities reported above:



<b>Fiscal Year Approved</b>	<b>Miles to be Closed</b>	<b>Miles to be Decommissioned</b>
1996	11.2	6.9
1997	22.8	0.0
1998	56.9	32.9
1999	39.7	0.0
2000	17.0	27.0
2001	16.8	14.3
2002	21.6	17.6
<b>Total</b>	<b>186</b>	<b>84.8</b>

**Roads Lawsuit Reporting:** In 1996, the Okanogan National Forest was sued by Northwest Ecosystem Alliance over failure to close non-system roads. In December 1999, the U. S. District Court of Western Washington ordered the Forest Service to examine documentation approving temporary roads to determine if such roads had been closed. Those that did not have adequate closure documentation were required to be field inspected, and open roads were to be decommissioned.

During the winter of 2000, Forest personnel inspected 136 closed timber sale files covering sales from 1979 to the present. A total of 775 temporary roads were approved for those projects, 348 of which had inadequate closure documentation. Those that had inadequate closure documentation and were not shown in GIS as closed, were placed on a list to field verify closure status in 2000 and 2001. Of the original 348 roads on the list as potentially open, 25 were already shown as open on existing inventories. Of those 25 roads shown as open in GIS, five were closed by a parent road closure, two had been subsequently converted to system roads, three were already closed, one was naturally obliterating and 14 were open.

Of the remaining 323 roads, 218 were field verified as effectively blocked or undriveable, 51 were effectively blocked by a parent road closure, 1 was recommended for adding to the system, 1 was planned for use in the Upper Aeneas Timber Sale, and field personnel recommended no work on 16 because the roads were not being used or were re-vegetating adequately, and decommissioning would have caused unnecessary soil disturbance. Although the Court's order did not apply to roads that were open because of subsequent breaching, field personnel were instructed to inventory all 323 roads, including verification of the effectiveness of the original closures. All remaining open roads were placed on the decommissioning list, regardless of whether they had been previously closed but breached. The remaining 36 open roads were placed on a list with the 14 previously identified open roads for decommissioning; four roads that were not driveable were also added for decommissioning.

<b>Total Timber Sale Files Inspected</b>	<b>Total Temporary Road Approvals</b>	<b>Total Potentially Open Roads</b>	<b>Effectively Blocked or Undriveable</b>	<b>Effectively Blocked by Parent Closure</b>	<b>Converted to System Road</b>	<b>Not Recommended for Decommissioning<sup>6</sup></b>	<b>Total Roads for Decommissioning</b>
136	775	348	221	56	2	19	54

The Court also ordered the Forest Service to decommission 25 roads a year starting in 2001 until all of the temporary roads identified above had been decommissioned. In 2000, if the funding was available, the Forest Service was required to decommission any road (up to 25 roads) that could be verified open on existing inventories. Six open roads were decommissioned in 2000 in response to this portion of the order (the additional open roads in GIS were not identified as part of the original 2000 list because additional timber sale files were returned to the Forest in 2001 which resulted in

additional open roads). An additional 25 roads were decommissioned in 2001. The remaining roads were decommissioned in 2002. Because of the expense of moving equipment to the widely separated closure sites, inspectors also authorized the closure of many additional breached roads in the general area of each closure, that are not reflected in the above numbers.

**Trend:** Road construction that adds to the Forest's transportation system is expected to remain low under current direction, and the Forest expects to continue road closure and decommissioning as funding is available. The Forest Service has a new roads policy that requires roads analysis at several different planning levels to determine the need for existing roads.

**Recommended Actions:** Results okay; continue monitoring. Continue to utilize watershed analysis, roads analysis, and project level analysis to identify the need for roads, and to update forest road inventories.

**Monitoring Item #54: Comparison of Actual & Planned Implementation Costs, Economic Efficiency and Economic Effects**  
***Dropped in 2001 Report***

**Monitoring Item #55: Actual Annual Fire Wildfire Occurrence Frequency by Statistical Cause**

**Objective or Purpose:** Assure that fire management direction is being met.

**Type of Monitoring:** Implementation   X   Effectiveness   X   Validation     

**Method of Monitoring:** Complete individual fire report for each wildfire.

**Unit of Measure:** Each.

**Criteria:** *Forest Plan* direction, Standards and Guidelines.

**Standards:** Change of +15% in total acres burned from 5-year average.

**Frequency Item is Monitored:** Every year.

**Frequency Item is Reported:** Every year.

**Evaluation:** The number of acres burned for all categories of fires except those caused by lightning are within the *Forest Plan* standard of +/- 15%. Lightning events are not predictable or controllable in terms of the number of wildfires that are caused.

Cause	5-yr fire average 1997-2001	5-yr acre average 1997-2001	No. of fires by cause 2002	Acres 2002
Campfire	30	316	9	1
Children	0	0	0	0
Debris Burn	13	3	0	0
Equipment	4	1	0	0
Incendiary	1	0.2	0	0
Lightning	264	5064	58	12189
Misc.	20	7	4	.3
Smoking	11	5	2	.2

**Recommended Action:** Results okay, continue monitoring.

**Monitoring Item #56:**  
**Dropped in 1997 Report**

**Monitoring Item #57:**  
**Dropped in 1997 Report**

**Monitoring Item #58:**  
**Dropped in 1997 Report**

**Monitoring Item #59: Total Suspended Particulate (TSP) Emission Production from the Forest's Prescribed Burning Program**

**Objective or Purpose:** Develop emission inventories for TSP for comparison with established baseline values for all prescribed burning projects predicted to consume 100 tons or greater

**Type of Monitoring:** Implementation   X   Effectiveness   X   Validation     

**Method of Monitoring:** Computed from data in the Daily Smoke Management Report

**Unit of Measure:** Tons/year.

**Criteria:** *Forest Plan* direction, Standards and Guidelines.

**Standards:** 10% change in TSP emissions produced from baseline value of 7,600 tons per year.

**Frequency Item is Monitored:** Daily, with Annual Summary

**Frequency Item is Reported:** Every year.

**Evaluation:** Total suspended particulate emission production is well below the standard set in the *Forest Plan* for prescribed burning.

Fire Year	FY 89	FY 90	FY 91	FY 92	FY 93	FY 94	FY 95	FY 96	FY 97	FY 98	FY 99	FY 00	FY 01	FY 02
Tons TSP Produced	1486	1324	831	998	1630	1005	760	653	725	931	1404	791	757	673

**Recommended Action:** Results okay; continue monitoring

**Monitoring Item #60: Operational and Administrative Effectiveness and Reasonableness Combined with #61 and #62 in 1997 Report**

**Objective or Purpose:** Assure that Forest Management Direction is being met

**Type of Monitoring:** Implementation   X   Effectiveness      Validation     

**Method of Monitoring:** Annually, review reclamation compliance and success of all or a random sample of all mineral-operating plans

**Unit of Measure:** Cases

**Criteria:** *Forest Plan* direction, Standards and Guidelines

**Standards:** Compliance reviews are performed on 80% of plans annually

**Frequency Item is Monitored:** Every year

**Frequency Item is Reported:** Every year

**Evaluation:** One Plan of Operation was approved during FY 2002. No appeal was received on that project.

Mineral project operators accepted mitigation measures during FY 2002. Environmental protection measures were complied with and no Notices of Non-compliance were issued to mineral operators. Required reclamation work was completed as scheduled. Some project updates are included below:

**Crown Jewel:** Newmont Mining Corp/Battle Mountain Gold requested termination of their Plan of Operations for the Crown Jewel surface mine on July 2001. They initiated reclamation of exploration drill sites and roads in June 2002, completing about 65% by the end of the field season.

**Buckhorn Mtn. Project:** Crown Resources Corporation conducted in-fill drilling on the Crown Jewel mineral deposit beginning in September, 2002. This work was to assist Crown's plans to submit a plan for underground mining of the deposit.

**Minnie Mine:** Clean up and reclamation of this abandoned site was completed in FY 1995. Water monitoring since that time has shown down-stream groundwater contaminants to be at or below background levels. Ground water elevations at the site have retreated to pre-1995 levels following historical highs noted in 1995.

**Alder Mine:** Survey work during FY 2002 established the exact location of mine workings associated with the private land.

**Abandoned and Inactive Mine Program:** Field assessments were conducted at three sites during the year; Hidden Treasure, Antimony Queen and Azurite.

**Recommended Actions:** Change management practices. Forest and District priorities are usually set early in the year but these are too easily forgotten as unscheduled projects surface or old projects resurface during the year. Continued Forest and District effort is needed to adhere to these priorities or make a conscious effort to periodically review and revise them in order that non-discretionary actions such as mining plan reviews can be completed within reasonable time frames.

**Monitoring Item #61:**  
***Combined with #60 in 1997 Report***

**Monitoring Item #62:**  
***Combined with #60 in 1997 Report***

**Monitoring Item #63: Minerals Withdrawals**

**Objective or Purpose:** Monitor Accumulation of Minerals Withdrawals

**Type of Monitoring:** Implementation X Effectiveness\_\_\_ Validation \_\_\_

**Method of Monitoring:** Continuously monitor total acres of existing and proposed mineral withdrawals

**Unit of Measure:** Acres

**Criteria:** *Forest Plan* direction, Standards and Guidelines

**Standards:** What is the increase of mineral withdrawal acreage above the current amount (644,400 acres)?

**Frequency Item is Monitored:** Every year

**Frequency Item is Reported:** Every year

**Evaluation:** No new mineral withdrawals were proposed or approved during FY 2002.

**Recommended Actions:** Results okay; continue monitoring.

Outputs and Effects (Unit of Measures)	Estimated Decade (Annual Avg)	FY 90	FY 91	FY 92	FY 93	FY 94	FY 95	FY 96	FY 97	FY 98	FY 99	FY 00	FY 01	FY 02
Minerals Operating Plans, Notices, Sales, etc.	75	26	57	42	44	45	39	54	35	40	29	37	36	38
Minerals Produced (Million \$)	0.10	0.004	0.025	0.014	0.035	0.004	0.003	0.004	0.003	0.009	.002*	.001*	.007	.024

\*The FY 2000 Monitoring Report displayed these values in Thousand \$ rather than Million \$. The correct amount is now shown.

**Monitoring Item #64:**  
***Dropped in 1998 Report***

**Monitoring Item #65:**  
***Dropped in 1998 Report***

**Monitoring Item #66:**  
***Dropped in 1998 Report***

**Item #67: Changes in Payments to County**  
***Dropped in 2001 Report***

**Monitoring Item #68: Changes in Lifestyles, Attitudes, Beliefs and Values**  
***Dropped in 1998 Report***

**Monitoring Item #69: Changes in Forest Contributions to Area Forest Products Industries Combined with Monitoring Items #40 and #42**

### **Monitoring Item #70: Heritage Resource Site Protection**

**Objective or Purpose:** Unevaluated and significant cultural resource properties are being protected as stated in the *Forest Plan* and in compliance with federal laws and regulations.

**Type of Monitoring:** Implementation  X  Effectiveness\_\_\_ Validation\_\_\_

**Method of Monitoring:** Monitor a stratified sample of all unevaluated sites and of all significant sites in active project areas

**Unit of Measure:** Report percent unevaluated and significant sites sampled and the respective compliance with the *Forest Plan*.

**Criteria:** *Forest Plan* direction, Standards and Guidelines

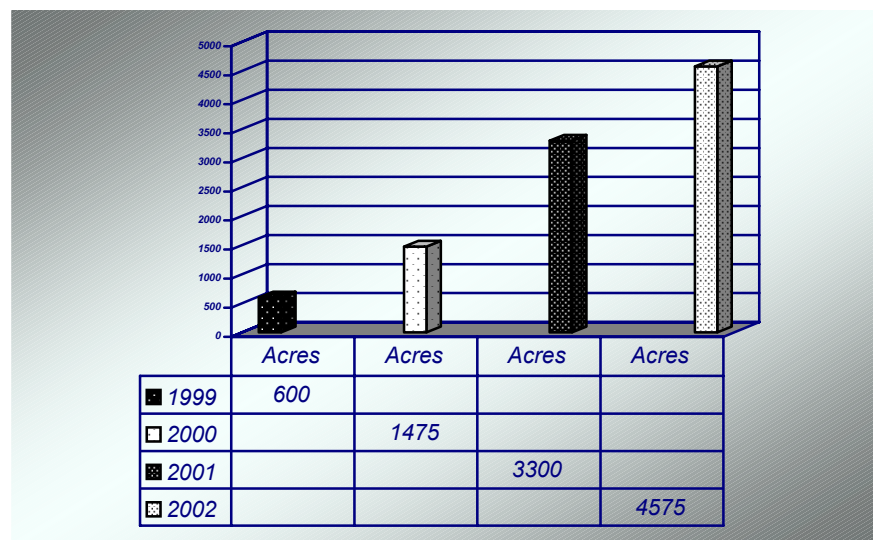
**Frequency Item is Monitored:** Every year

**Frequency Item is Reported:** Every year

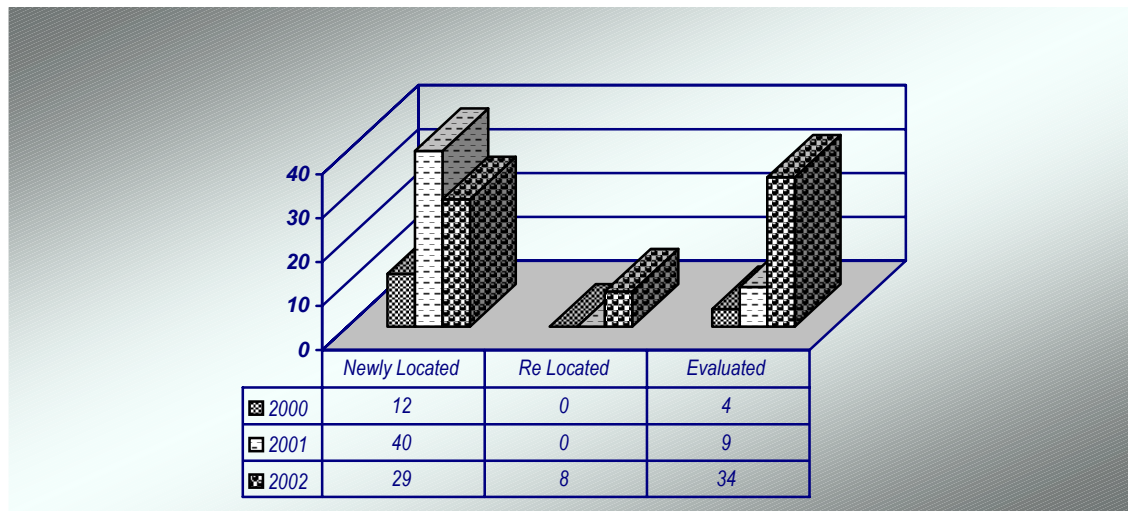
**Evaluation:** Adherence to Sections 106 and 110 of the National Historic Preservation Act and the 1997 Programmatic Memorandum of Agreement (PMOA) regarding the management of cultural resources on National Forests in Washington State continues to be emphasized. Heritage resource input was provided for numerous NEPA interdisciplinary teams projects, including large scale management projects, grazing allotment projects, prescribed burns, salvage sales, recreational developments and improvements, facilities, and road projects.

A total of 28 heritage resource reports were completed in compliance with Section 106 of the National Historic Preservation Act (NHPA) and the current PMOA regarding cultural resource management on National Forests in Washington. This represents an increase over the number reported in FY 200. Projects encompassing 28,079 acres received prescribed pedestrian inventory for cultural resources. In these projects, 4,575 acres were 100% surveyed, an increase of 152% of the previous year's surveyed acres. As a result of these inventories, twenty-nine new cultural resource sites were documented. Thirty-four sites were evaluated for National Register eligibility. No site intrusions were reported during Forest undertakings.

Acres 100% Surveyed



## Site Documentation



The Okanogan archaeologist conducted the Okanogan portion of a refresher course for certified cultural resource technicians at the Okanogan Valley Office. One *Passport in Time* public archeology project was conducted on the Okanogan in FY 2002 that resulted in a survey and recording of multiple administrative sites.

Information about Forest projects, site identification and protection continues to be shared with the Confederated Colville Tribes and the Yakama Nation throughout the year via Forest mailings and formal government-to-government consultation for projects requiring a decision document or when research indicated a potential tribal interest. In addition, telephone and electronic communications are used to increase communications between Agency and Tribes. Government-to-government consultation continues to be a major element of the FY 2002 program.

**Recommended Action:** Results okay; continue monitoring.

### **Monitoring Item #71: Management of Competing and Unwanted Vegetation**

**Objective or Purpose:** Reduce the reliance on herbicides and prescribed burning

**Type of Monitoring:** Implementation ☒ Effectiveness ☒ Validation ☐

**Method of Monitoring:** Review attainment reports; review program effectiveness in achieving resource goals

**Unit of Measure:** Percent of infested acres treated with herbicides

**Criteria:** Mediated Agreement Requirements

**Frequency Item is Monitored:** Every year

**Frequency Item is Reported:** Every year

**Evaluation:** Nearly all project funding was reduced during the fire season, including noxious weed management funds, to pay fire fighting costs, thus reducing the amount of funds available to complete scheduled work in 2002. Contracts (herbicide applications) were continued to the obligated funding level, but other treatments including mechanical, manual, bio-control and cultural treatments were substantially impacted because of the reduced funding.

Emphasis is on reducing chemical control of noxious weeds, but initial treatments on heavily infested sites requires intense control work to get weed populations below damage thresholds. Areas treated with herbicide and that have had



follow up chemical treatment require considerably less herbicide per acre than untreated noxious weed populations (see graphs below for noxious weed levels following initial treatments).

Project plans continue to use the prevention strategy to keep noxious weeds from becoming established in project areas. Control work on new invasive species helps to improve range conditions for livestock by creating more favorable conditions for natives and desirable non-native plant growth. The use of manual, bio-control and mechanical management methods in recreational areas helps to improve recreational experiences and reduce the likelihood that noxious weeds will be transported out of the area.

#### Areas Treated

About 3,466 acres were treated using the following methods:

Treatment	Acres
Mechanical	0
Chemical	3005
Manual	315
Bio-control	76
Treated and seeded	70
<b>Total</b>	<b>3466</b>

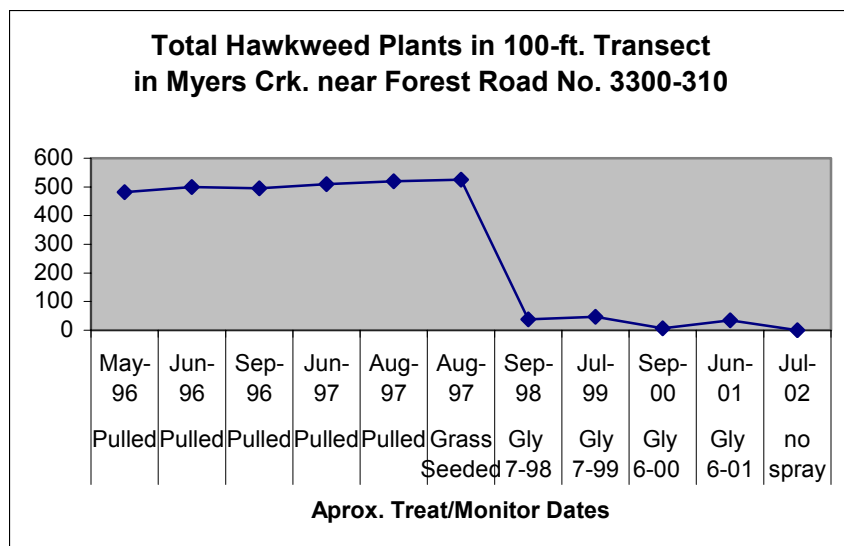
Bio-agents established in the past continue to impact diffuse knapweed and musk thistle. Chemical treatments included roadsides, follow-up work on new invasive species, such as orange or yellow hawkweed, and spot treatments sites in weed-infested areas.

*An Okanogan and Wenatchee National Forests Noxious Weed Prevention Strategy* was approved at the forest level in 2002. It incorporates national and regional strategy with local forest conditions. It is now being implemented. Prevention strategies are proposed, evaluated and included in new projects plans, and are implemented in new projects.

#### Monitoring

New infestations of invasive species, especially hawkweed, continue to be a concern. District weed staffs look for undiscovered sites and regularly inspect treated sites for isolated plants. Other interested parties, such as the Okanogan County Noxious Weed Board staff, also provide information on hawkweed infestations on private lands adjacent to and on National Forest lands. Generally, isolated plants are easiest to spot when they are flowering and these are either sprayed or the flowers are removed from the plant during flowering.

The amount of herbicide used on a per acre basis continues to decline because the number of individual plants is reduced



and the treatment of individual plants requires less herbicide than a broadcast application.

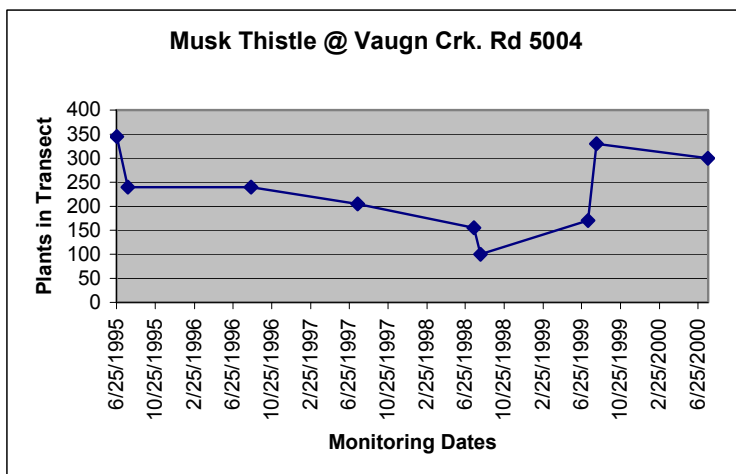
Beginning in 1998, the hawkweed treatment site at Myers Creek (below) was treated with RODEO®, the glyphosate formulation for use near water. Since glyphosate enters the plant only through the leaves, it must be re-applied when new plants grow. It was reapplied in 1999, 2000 and 2001, but not on this site in 2002. Monitored levels of plants continue to be low, so fewer plants are found and sprayed.

Other new noxious weeds species include dalmatian toadflax and musk thistle. Inventoried acres of these

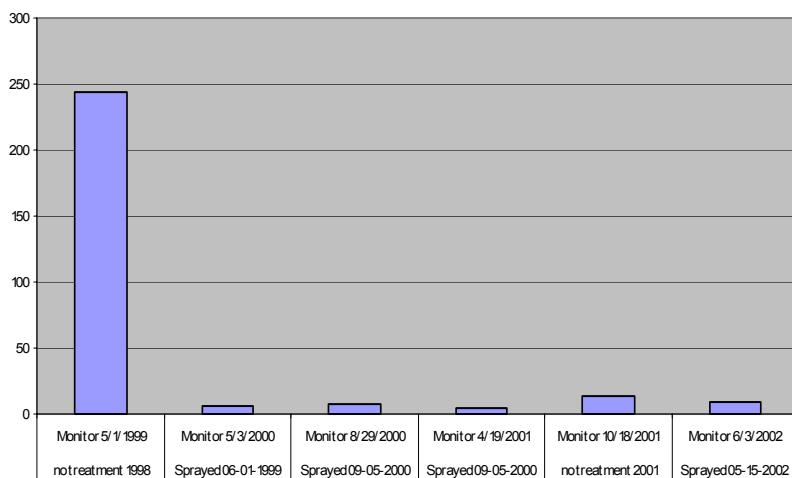


plants are increasing as more inventory work is accomplished. Most of the past work on musk thistle was limited to hand pulling or removal of seed heads from the site. This is substantial work, and workers often miss seed heads due to differing plant maturities or just overlook the seed heads. Eventually missed seed heads develop and continue to be a source of seeds.

Monitoring of selected sites over the past several years shows hand pulling only to be a generally ineffective treatment to reduce milk thistle populations. The Vaughn Creek site has been treated by hand pulling only since 1995, and transect populations have not dropped below one plant per four square feet.



Knapweed continues to be a noxious weed of concern. It is a widespread, Class B weed in Okanogan County. It constitutes most of the inventoried noxious weed acres on the Okanogan National Forest. Knapweed management includes all methods; manual, mechanical, cultural, herbicides and bio-control agents. Herbicide use has reduced plant populations in the Forest, making it easier for follow-up work to include the other methods. Control work on several sites shows the same type of success as shown in the Salmon Creek knapweed site. This site was treated with picloram in 1998, with follow-up on new knapweed plants for two more years. Knapweed seeds are generally viable for 10 to 15 years, so follow-up treatment is necessary for several years with nearly every control method. In Nicholson Creek, alternative year coverage of knapweed plants has kept the plant numbers of plants at a low level. Since individual plants are sprayed, lower plant numbers result in smaller amounts of herbicide used per acre to control the knapweed.



**Total Knapweed Plants in 100 ft Transect in Salmon Creek South of Fish Lake, Okanogan County Road 4282 (treated with picloram)**

Successes in bio-control of knapweed have been reported on private lands when a combination of bio-agents lives on the same plant. Eventually bio-control would lead to a lower level of knapweed populations and keep the levels lower.

The Tonasket Ranger District used *wicking* application methods in Toroda Creek during 2002 in an area that had been previously sprayed using a backpack sprayer. The purpose of the treatment was to reduce damage to non-target plants. Treatment was on knapweed and hound's tongue. Tall plants were successfully treated with no damage to non-target plants. Treatment of smaller plant rosettes by wicking was not as successful for full control, because it was difficult to put adequate herbicide on the target plant.

Two water samples were collected from Little Bridge Creek (tributary to the Twisp River) immediately following an application of picloram and 48 hours following application. Picloram was applied 50-100 feet away from Little Bridge Creek. The samples in Little Bridge Creek were collected just below the treated area. Sample results were *no detection* of picloram.

#### **Bio-Control**

The Forests continues to support the Quad County (Okanogan, Ferry, Stevens, and Pend Oreille) bio-control project.

Dalmatian toadflax also continues to be a problem on National Forest System lands. There has been some work done in British Columbia, Canada with *Mecinus janthinus* insects. These insects inflict substantial damage to dalmatian toadflax; actually killing stems or damaging the plant so they fail to flower. Unfortunately, these insects reside in Canada and cannot yet be brought across the border. Although there are no known releases or populations of *Mecinus janthinus* on the Okanogan National Forest, there are reports of pockets of these insects in northeastern Washington, so the bio-agents may eventually move into the area.

#### **Prevention Strategy**

Continued emphasis on the prevention strategy for noxious weed management is included in the development of new vegetation management projects, recreation site maintenance, gravel pit use, road reconstruction, or site disturbing activities. A prevention strategy is considered in every site disturbing activity. Where noxious weeds are established at undesirable levels, emphasis is placed on controlling new invaders, stabilizing noxious weed populations and where there is little likelihood of controlling or successfully managing weed populations, and preventing those weeds from infecting other lands.

#### **Inventories**

Noxious weed inventories are an essential tool for the control of noxious weeds and approximately 400 acres were inventoried in 2002, including confirmations of known sites, expansion of existing sites, and newly discovered noxious weed populations. Some of the inventory was done as part of other resource inventories, and some inventory work was determining what the weed status was for generally known populations. The most recent inventories show about 51,000 acres have light to heavy noxious weed infestations.

**Recommended Actions:** Results okay; continue monitoring new invasive species with high potential for spread in the field. Use tools such as GIS to track treatments and to help interpret spread of noxious weeds and help set priorities on treatment areas. Continue to use the prevention strategy in the planning of all ground disturbing projects and implement the Okanogan and Wenatchee National Forests Prevention Strategy.

### **Monitoring Item #72: Survey and Manage**

**Objective or Purpose:** Compliance with the Survey and Manage Requirements of the *Northwest Forest Plan*.

**Type of Monitoring:** Implementation ☒ Effectiveness ☐ Validation ☐

**Method of Monitoring:** For Survey Strategy 2 species, summarize surveys completed prior to project implementation for all areas within range and suitable habitat of identified survey and manage species.

**Unit of Measure:** Acres surveyed.

**Criteria:** *Northwest Forest Plan* direction, Standards and Guidelines

**Standards:** Required surveys completed following established protocols.

**Frequency Item is Monitored:** Every year.

**Frequency Items is Reported:** Every year.

**Evaluation:** The estimates of Strategy 2 species acres surveyed in FY 2002 are listed below:

Taxa Group	Acres Surveyed
Bryophytes, Lichens, & Vascular Plants	585
Fungi	585

**Recommended Actions:** Initiate program to locate S&M known sites on the Forest and complete work on Strategic Surveys and Purposive Surveys for all Categories of species. Continue pre-disturbance surveys for Category A and C species prior to project implementation, manage all known sites for Category A, B, and E species, and determine high priority sites to manage for Category C, and D species. Seek continued regional support for development of local expertise in survey and manage species taxonomy.

## SUMMARY OF PROGRAM ACCOMPLISHMENTS

This table compares the actual levels of resource outputs and management effects with the estimated levels stated in the LRMP. Deviation from the estimates can be tolerated more the first few years of implementation because the estimates stated in the LRMP are annual averages for an eleven-year period. The accurate monitoring of these outputs and effects are essential indicators of the LRMP's success. The efficiency of dollars spent can be evaluated with respect to the achievement or non-achievement of these outputs and effects.

Outputs and Effects (Unit of Measures)	Estimated Decade (Annual Avg)	FY 90	FY 91	FY 92	FY 93	FY 94	FY 95	FY 96	FY 97	FY 98	FY 99	FY 00	FY 01	FY 02
Developed Rec Capacity (1000 RVDs) Non Wilderness	622	622	622	622	622	622	622	622	622	622	622	622	622	622
Dispersed Rec Capacity (1000 RVDs) Includes WFUDS														
Semi-primitive Non Motorized	161	161	161	161	161	161	161	161	161	161	161	161	161	161
Semi-primitive Motorized	18	18	18	18	18	18	18	18	18	18	18	18	18	18
Roaded Natural	86	86	86	86	86	86	86	86	86	86	86	86	86	86
Roaded Modified	346	346	346	346	346	346	346	346	346	346	346	346	346	346
Wilderness Capacity (100 RVDs)														
Primitive	405	405	405	405	405	405	405	405	405	405	405	405	405	405
Trail Constr/Reconstruction (Miles)	30	6.9	21.4	17.3	15.1	10.6	2.7	1.2	4.7	44.9	11.9	8.5	6.5	43.3
Developed Site Construction/Reconstruction (PAOT)	20	150	0	0	125	0	0	0	0	0	0	20	0	4.5
Visual Quality Objectives (1,000 Acres)														
Preservation VQO	626	626	626	626	626	626	626	626	626	626	626	626	626	626
Retention VQO	332	332	332	332	332	332	332	332	332	332	332	332	332	332
Partial Retention VQO	53	53	53	53	53	53	53	53	53	53	53	53	53	53
Modification VQO	584	584	584	584	584	584	584	584	584	584	584	584	584	584
Maximum Modification	111	111	111	111	111	111	111	111	111	111	111	111	111	111
Unroaded Areas Assigned to Unroaded Management Prescriptions (1,000 Acres)	202	202	202	202	202	202	202	202	202	202	202	202	202	202
Wilderness Management (1,000 Acres)	626.2	626.2	626.2	626.2	626.2	626.2	626.2	626.2	626.2	626.2	626.2	626.2	626.2	626.2
Cultural Resource Inventory (1,000 Acres)	15	24.3	87.4	20.1	33.0	6.6	19	392.0	44	20.5	0.6	1.4	2.9	4.6
Trail Maintenance (Miles)	900	678	683	704	715	1084	700	700	700	700	700	806	806	549.1
Anadromous Fish Habitat Improvement (1,000 lbs. of fish) <sup>1</sup>	1.0	0.3	Data Not Avail- able	Data Not Avail- able	Data Not Avail- able	Data Not Avail- able	Data Not Avail- able	Data Not Avail- able	Data Not Avail- able	Data Not Avail- able	Data Not Avail- able	Data Not Avail- able	Data Not Avail- able	Data Not Avail- able
Anadromous Fish Habitat Improvement (Acres)	3	0	4	15	30	100	200	125	6.5 miles	6.3 miles	6 miles	2 miles	6 miles	14 miles
Anadromous Fish Habitat Improvement (Structures)	14	46	20	35	37	10	12	10	1	0	0	12	0	NA
Res. Fish Habitat Improvement (Acres)	3	0	2	10	10	12	10	0	5.0 miles	8.2 miles	6 miles	2 miles	11 miles	10 miles

Outputs and Effects (Unit of Measures)	Estimated Decade (Annual Avg)	FY 90	FY 91	FY 92	FY 93	FY 94	FY 95	FY 96	FY 97	FY 98	FY 99	FY 00	FY 01	FY 02
Management Indicator Species (Habitat Capability)														
Deer: Mule and White-tailed Winter Range	17.1/35.6	17.1/ 35.6	17.1/ 35.6	17.1/ 35.6	17.1/ 35.6	17.1/ 35.6	17.1/ 35.6	17.1/ 35.6	17.1/ 35.6	17.1/ 35.6	17.1/ 35.6	17.1/ 35.6	7.1/ 35.6	7.1/ 35.6
Forest-wide (1,000 animals)														
Spotted Owl (pairs)	27													
Barred Owl (pairs)	81	27	27	27	27	27	27	27	27	27	27	27	27	27
Pileated Woodpecker (pairs)	1109	81	81	81	81	81	81	81	81	81	81	81	81	81
Pine Marten (animals)	2949	1109	1109	1109	1109	1109	1109	1109	1109	1109	1109	1109	1109	1109
Three-toed Woodpecker (pairs)	262	2949	2949	2949	2949	2949	2949	2949	2949	2949	2949	2949	2949	2949
Primary Cavity Excavators														
Outside Wilderness/% of Maximum Potential Woodpecker Population	51/62	51/62	51/62	51/62	51/62	51/62	51/62	51/62	51/62	51/62	51/62	51/62	51/62	51/62
Lynx: Forest-wide (animals)	45													
Ruffed Grouse: Forest-wide (pairs)	908	45	45	45	45	45	45	45	45	45	45	45	45	45
		908	908	908	908	908	908	908	908	908	908	908	908	908
Wildlife Habitat Improvement (Ac/Structures)	2500/ 1000	793/ 120	174/ 867	3/ 206	884/ 322	410/ 259	608/ 177	783/ 9	199/ 386	640/ 14	1030/ 0	793	945/0	650/ 105
Range: Permitted Grazing (1,000 AUMs)	53.2	61.9	56.9	52.8	53.8	53.5	57.7	57.7	57.3 <sup>2</sup>	57.7 <sup>3</sup>	56.0 <sup>4</sup>	52.4	51.8	48.0
Range: Vegetation Mgmt (1,000 Acres)	717	NE	717	717	717	717	717	717	717	717	717	717	717	717
Noxious Weeds (Acres)	390	83	102	522	47	465	510	1391	1032	1130	3200	6334	3468	3466
Structural Improvements/ Fences (Miles)	29	19.5	12.3	8.75	10.25	11.0	27	15	7	4	4	4	5	2
Structural Improvements/Water Developments (num)	30	34	16	15	14	10	17	21	19	5	13	16	24	4
Non-Structural Improvements (Acres)	390	160	545	1036	11	555	445	403	100	0	0	0	0	0
Allowable Sale Quantity (MMBF/Yr) c/ Mixed conifer	63.3	69.07	24.91	18.72	5.9	7.07	15.72	7.90	16.1	4.4	13.4	0.3	6.6	3.5
Lodgepole pine	46.3	56.01	19.84	17.87	4.4	5.39	11.93	6.48	15.5	4.4	13.4			
SSC	16.2	16.06	5.07	.84	1.5	1.67	3.80	1.42	.6	0	0			
	0.8	0	0	0	0	0	0	0	0	0	0			
Allowable Sale Quantity (MMCF/Yr) <sup>5</sup>														
Mixed Conifer	12.3	13.41	4.84	3.64	1.19	1.377	3.06	1.58	3.13	.86	2.71	0.7	1.33	7
Lodgepole Pine	8.9	10.30	3.85	3.47	.89	1.049	2.31	1.30	3.01	.86	2.71			
SSC	3.2	3.11	.98	.16	.30	.329	.75	.28	.12	0	0			
	0.2	0	0	0	0	0	0	0	0	0	0			
Firewood (Million Cubic Feet)	0.7	.324	0.5	0.5	0.6	d/ 1.1	d/ 1.4	d/ 1.2	d/ 1.1	2.8	1.5	0.23	0.45	.52
Reforestation (1,000 Acres/ Year) e/	5.7	3.748	5.161	4.350	5.060	4.328	5.275	4.165	5.044	2220	2,036	1670	2078	1967
Timber Stand Improvement (1,000 Acres/Year)	1.9	2.928	4.505	6.189	5.476	3.150	1.332	3.861	2.242	2,508	2.855	.977	3.715	.120
Timber Growth (Million Cubic Feet)	112.1	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Water Yield (1,000 Acre Feet)	2315	2315	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Accelerated Sediment Production (1,000 Tons/Decade)	145.6	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Watershed Improvement (Acres)	100	80	24	65	302	180	460	189 <sup>6</sup>	91	118	84	102	10	0
Minerals Operating Plans, Notices, Sales, etc.	75	26	57	42	44	45	39	54	35	40	29	37	36	38
Minerals Produced (Million \$)	0.10	0.004	0.025	0.014	0.035	0.004	0.003	0.004	0.003	0.009	0.002	0.001	.007	.024
Arterial and Collector Road Construction/Reconstruction	5.2	0.6	0	3.1	0.1	0.2	0	0.1	0	0	0	0	0	

Outputs and Effects (Unit of Measures)	Estimated Decade (Annual Avg)	FY 90	FY 91	FY 92	FY 93	FY 94	FY 95	FY 96	FY 97	FY 98	FY 99	FY 00	FY 01	FY 02
Timber Purchaser Road Construction & Reconstruction Construction Reconstruction	41.0	30.6 58.9	31.1	32.3	26.8	16.5	3.23 16.58	1.57 1.57	4.9 7.6	0.0 0.2	1.4 6.4	0 4.1	0 6.6	.5 16.6
Roads Suitable for Public Use (Miles) Passenger Car (Miles) High Clearance Vehicle Only (Miles)	1029 860	1050 1034	1055 1037	1030 1165	998 1012	1030 1153	1030 1158	1030 979	1050 930	1046 861	1046 866	1025 801	782 581	799 581
Fuel Treatment (1,000 Acres)	6.8	7.9	4.6	6.6	4.4	3.6	1.1	2.4	2.0	5.7	5.7	6.0	3.8	4.4
Landline Location (Miles)	30	18.7	21.5	27.5	17.1	18.0	18.0	17.0	6.0	3.8	0.5	1.0	7	5.7
Landline Maintenance (Miles)	20	9.3	17	15.75	20.0	15.0	23.0	22.0	4.0	22.9	4.0	5.0	3	2.3
Land Exchange/Transfer (Acres)	300	0.95	0	0	107	4	101	920	0	0	105	0	.5	10.1

NE = Not Estimated

1 Due to natural variability, estimates of anadromous fish harvest and habitat improvement activities are impossible to accurately assess; recommend that this item be dropped in future monitoring reports.

2 This number was shown incorrectly in the 97, 98 and 99 reports

3 This number was shown incorrectly in the 1999 report. The original number in the 1998 report was correct.

4 This number was estimated in the 1999 report because of databases were off-line. This is the correct amount for 1999.

5 Not possible to break out volumes into mixed conifer, lodgepole, or ssc for FY 00

6 133 acres KV + 56 acres soil and Water = 189 acres

## ***FOREST PLAN AMENDMENTS***

At the end of Fiscal Year 2002, thirty-one site-specific amendments had been made to the *Okanogan National Forest Land and Resource Management Plan* since it was signed in 1989. All have been non-significant amendments and are listed as follows:

<b>NO.</b>	<b>Date</b>	<b>Decision Name</b>	<b>Standard/ Guideline Amended</b>	<b>Amendment</b>
1	5/4/90	Meyers Beetle Timber Sale	MA25-8A MA25-6A	Site-specific amendments for project area only for visual quality and cover because of insect and disease problems.
2	11/19/90	Forest Plan Amendment # 2	Fores-wide 17-6 MA5-8B MA5-20E MA11-20C MA12-20C MA14-20C	Changes to correct errors and to ensure consistency with other Standards and Guidelines.
3	12/14/90	Forest Plan Amendment # 3	Forest-wide 17-8	Temporary amendment to allow both roads 4330 and 4010 to be plowed and open for two weeks to allow logging of two timber sales.
4	5/16/91	Forest Plan Amendment #4	None	Clarify the intent of some of the monitoring items, and correct errors.
5	5/16/91	Lyman Timber Sale	MA5-6A MA11-6B MA14-6 MA14-6B MA26-61	Eliminates total rows for cover requirements and clarifies Standards and Guidelines.
6	8/6/91	Forest Plan Amendment #6	None	Updates schedule of activities in Forest Plan, Appendices A-F.
7	2/7/92	Forest Plan Amendment #7	17-6 17-8	Error in current wording results in allowing a segment of a road to be snowplowed, when intent was that entire route remain unplowed.
8	8/3/92	Forest Plan Amendment #8	None	Updates scheduled of activities in Forest Plan, Amendment A-F.
9	9/23/92	Coyote timber Sale	MA26-6A	Site specific amendment for project area only for Snow Intercept Thermal Cover and Winter Thermal Cover to treat insects and disease and provide long-term cover.
10	2/26/93	Little Bonaparte Timber Sale	Forest-wide 6-1 MA14-6A MA14-6C MA5-17C MA14-17A	Site-specific amendment for project area only to allow cover values below, and road densities above forest plan Standards and Guidelines. Cover values are reduced to allow treatment of severe insect and disease, and road densities are exceeded to allow management of the area to reduce post sale densities.
11	5/14/93	Dragon Timber Sale	MA26-17B	Site-specific amendment for project area only, allowing road density above forest plan Standards and Guidelines in discrete MA26-28, because all roads in the management area that can be closed are already closed.
12	6/15/93	Lamb Butte Timber Sale	MA14-17A	Site specific amendment for project area only, allowing road density above forest plan Standards and Guidelines for discrete MA14-04, because all roads in the management area that can be closed are already closed. Also allows temporary amendment for additional roads to be opened during life of sale.

NO.	Date	Decision Name	Standard/ Guideline Amended	Amendment
13	9/3/93	Forest Plan Amendment #13	MA15A-210 MA15B-21P MA15B-21Q MA15A-21U MA15B-21Z	Clarifies wilderness Standards and Guidelines.
14	9/6/95	Forest Plan Amendment #14		Amends Forest Plan to allow snow plowing and wheeled vehicle use of Road 52, a designated snowmobile route, during the winter of 1995-96, to facilitate quick removal of the fire-killed, deteriorating trees in the Whiteface fire area.
15	4/12/96	Forest Plan Amendment #15	MA15A-19E MA15B-19E	Decisions to declare any lightning fire in the Pasayten Wilderness a prescribed natural fire will follow the direction in the Pasayten Wilderness Prescribed Natural Fire Plan. A prescribed fire plan shall be approved prior to the use of prescribed fire in the Lake Chelan-Sawtooth Wilderness.
16	5/31/96	Cayuse Timber Sale	MA14-6A	Reduce snow intercept/thermal cover for deer in the winter range by an additional 1% to improve forest health and accelerate the growth of healthy future wildlife cover.
17	9/3/96	Doe Timber Sale and Associated Activities Forest Plan Amendment #17	MA25-17C MA17-8	Allows open road density in discrete MA25-03 to exceed Forest Plan standard and guideline MA25-17C during the sale. Portion of groomed snowmobile route along Road 5010 to be relocated to an adjacent planned trail, and approximately 2400 feet of the east half of Road 5100 beyond the sno-park may be plowed.
18	9/30/96	Shady Timber Sale	MA25-17C	Allows open road density in discrete MA25-14 to exceed the Forest Plan standard and guideline during the life of the sale.
19	2/3/97	Crown Jewel Mine and Forest Plan Amendment #19	MA27	Creates a new minerals management area (MA27) with goals, objectives, Standards and Guidelines.
20	6/9/97	Roger Lake RNA/Forest Plan Amendment #20	MA8	Establishes Roger Lake area as a Research Natural Area.
21	9/12/97	Long Draw Salvage Timber Sale/Forest Plan Amendment #21 <b>Decision withdrawn</b>	PACFISH RHCA widths	Modifies PACFISH interim RHCA widths where necessary to achieve riparian management goals and objectives. Subsequently withdrawn when decision was withdrawn.
22	9/29/97	Beaver Salvage Timber Sale/Forest Plan Amendment #22	PACFISH RHCA widths	Modifies PACFISH interim RHCA widths where necessary to achieve riparian management goals and objectives. Subsequently withdrawn when decision was withdrawn.



NO.	Date	Decision Name	Standard/ Guideline Amended	Amendment
		<b><i>Decision withdrawn</i></b>		
23	4/3/98	Beaver Salvage Timber Sale/Forest Plan Amendment #23	PACFISH RHCA widths	Site-specific amendment to PACFISH interim widths for life of this sale to achieve riparian management goals and objectives.
24	5/19/98	South Twentymile Timber Sale/Forest Plan Amendment #24 <b><i>Old growth amendment withdrawn</i></b>	MA14-17A	Amends road density in discrete MA14-05 and restores old growth characteristics in three stands of timber; site specific to this sale only. Old growth portion of this amendment was withdrawn.
25	5/27/98	Oakley Timber Sale/Forest Plan Amendment #25	MA14-6A	Amends the Forest Plan to allow management activities to improve long-term winter thermal cover for deer.
26	9/30/98	Bailout Prescribed Fire for Natural Fuels Reduction/ Forest Amendment #26	F/W19-8 MA26-6A	Allows site specific burning of natural fuels within 128 acres of mixed conifer Forest Plan old growth located in discrete MAs 26-33 and 26-34, to move structure towards historic ranges and promote late/old structure, and to protect and to develop snow intercept thermal cover which currently does not meet Standards and Guidelines.
27	5/18/99	Redmill Timber Sale, Road Management and Noxious Weed Management and Forest Plan Amendment #27	MA 14-6A	Reduction in snow intercept/thermal cover in MA 14-23 to help reduce disease and move stands toward conditions that maintain deer winter cover and increase long term sustainability of deer winter range.
28	5/15/99	Chewuch RNA and Forest Plan Amendment #28	MA-8	Establishes the Chewuch Research Natural Area.
29	2/11/00	Coco Integrated Resource Projects #29	MA26-17B	Changes road density standard in MA26-31 from 1.0 miles/square mile to 1.3 miles/square mile to allow main arterials and collectors to remain open
30	2/11/00	Prescribed Fire Projects from the Coco Integrated	MA19-8	Allows the use of prescribed fire in two old-growth stands to reduce natural fuels and encroachment of small trees.

NO.	Date	Decision Name	Standard/ Guideline Amended	Amendment
		Resource Projects EA #30		
31	7/18/00	TPR Stand Treatment, Road Management and Prescribed Fire #31	MA-26-20J	Allows winter logging in mule deer winter range for this project only in MA26-05 to mitigate soil impacts and reduce rate of spread of noxious weeds.

In addition, the *Forest Plan* has been amended by four Multi-Regional or Regional amendments. These are:

1. The *Record of Decision and Final Supplemental Environmental Impact Statement on Management of Habitat for Late Successional and Old-Growth Forest Related species within the Ranger of the Northern Spotted Owl*, signed by Secretary of Agriculture Mike Espy and Secretary of Interior Bruce Babbitt on April 13, 1994;
2. The *Decision Notice and Environmental Assessment for Revised Continuation of Interim Management Direction Establishing Riparian, Ecosystem and Wildlife Standards for Timber Sales* signed by Regional Forester John Lowe on June 25, 1996;
3. The *Decision Notice and Environmental Assessment for the Interim Strategies for Managing Anadromous Fish-producing Watersheds in Eastern Oregon and Washington, Idaho, and Portions of California (PACFISH)* signed by USDA Forest Service Chief Jack Ward Thomas and USDI Bureau of Land Management Director Mike Dombeck on February 24, 1995; and
4. The *Decision Notice and Environmental Assessment for Interim Strategies for Managing Fish-producing Watersheds in Eastern Oregon and Washington, Idaho, Western Montana and Portions of Nevada (INFISH)* signed by USDA Forest Service Regional Foresters Hal Salvasser (Northern Region), Dale N. Bosworth (Intermountain Region) and John E. Lowe (Pacific Northwest Region) on July 28, 1995.

## ***SCHEDULE OF PROPOSED ACTIONS***

The Forest Service published revised policies and procedures for implementing the National Environmental Policy Act (NEPA) on September 18, 1992. One major change in the revised policies and procedures is the requirement that a schedule of proposed actions (SOPA) be published quarterly. The purpose of this schedule is to provide notice of proposals that may undergo environmental analysis and documentation to interested and affected agencies, organizations and individuals. All documents for which the Okanogan National Forest has developed a proposed action are listed on the quarterly schedule, and decisions made during the previous quarter are highlighted.

Projects listed in the schedule disclose the following information: Name of project, description, location, when scoping will begin, status, estimated date of decision, and contact person.

If you have any questions about the schedule, or wish to receive a copy of the schedule, call the Planning and Environment section of the Okanogan and Wenatchee National Forests at (509) 662-4335, or write to: Okanogan and Wenatchee National Forests, Environmental Affairs, 215 Melody Lane, Wenatchee, WA 98801. If you have questions or comments specific to the 2001 Okanogan National Forest Monitoring Plan, please contact Jan Flatten, Okanogan National Forest Environmental Coordinator, at (509) 826-3277 or write her at: 1240 South Second, Okanogan, WA 98840.

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